MagicDraw RConverter

Version 1.4

User Manual

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1. Getting Started

1.1. Product Overview

MagicDraw RConverter Version 1.4 generates data file in Rational Rose's (*.mdl) to MagicDraw's (*.xml). By obtaining information from Rational Rose via Rational Rose API (REI) and using VB6.0 to calculate the change, the result file is saved in MagicDraw file (xml file extension) format.

1.2. Product Features

MagicDraw RConverter Version 1.4 converts all Rose's diagrams and components to MagicDraw's, which is defined in Unified Modeling Language (UML), and saves data file in MagicDraw-supported file format (*.mdl). Those diagrams defined in UML are listed alphabetically below:

- Activity diagram
- Class diagram
- Collaboration diagram
- Component diagram
- Deployment diagram
- Sequence diagram
- StateChart diagram
- Three-tiered diagram
- UseCase diagram

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No Magic, Inc.

Attn.: Legal Department

651 Corporate Circle, Suite 100

Golden, CO 80401

USA

Tel. (303) 215-9955

Fax (303) 215-9668

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1.4. Installation

1.4.1. System Requirements

- Intel Pentium 4, CPU3.00 GHz, RAM 512MB, Hard disk free space of 10.8 GB (recommended)
- Rational Rose 2003 (Release Version: 2003.06.13.402.000)
- MagicDraw 9.0

The assumption at the beginning of this project is that Rational Rose file formats can be different in any versions. Since Rational Rose's newest version is capable of reading all format of previous version, our converter program, which obtains data via the newest Rational Rose API (Rational Rose 2003 Release Version: 2003.06.13.402.000), does not need to concern about backward compatibility or RR file format, Rose Extensibility Interface (REI) does the job for us.

This design has some limitations also, the user needs to install Rational Rose prior usage of our converter tool and if Rose's REI does not work or provide useful information properly, the result of the conversion will have something different from the original one for sure (may be we lost some information during conversion).

1.4.2. Platform

Microsoft Windows XP Profession, Version 2002, Service Pack2

1.4.3. Installation Procedure

STEP #1 Double-click on the executable file "*MagicDraw RConverter.msi*" to start the installation process

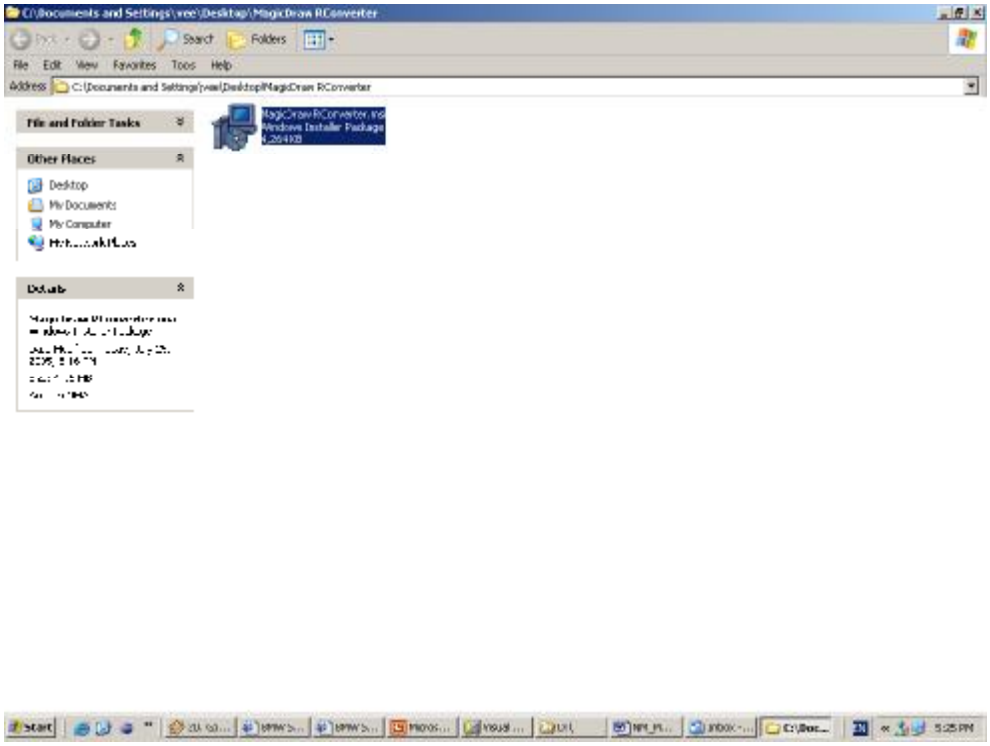


Figure 1 -- Begin application installation window

STEP #2 The welcome dialog box displays, click "*Next*" to continue

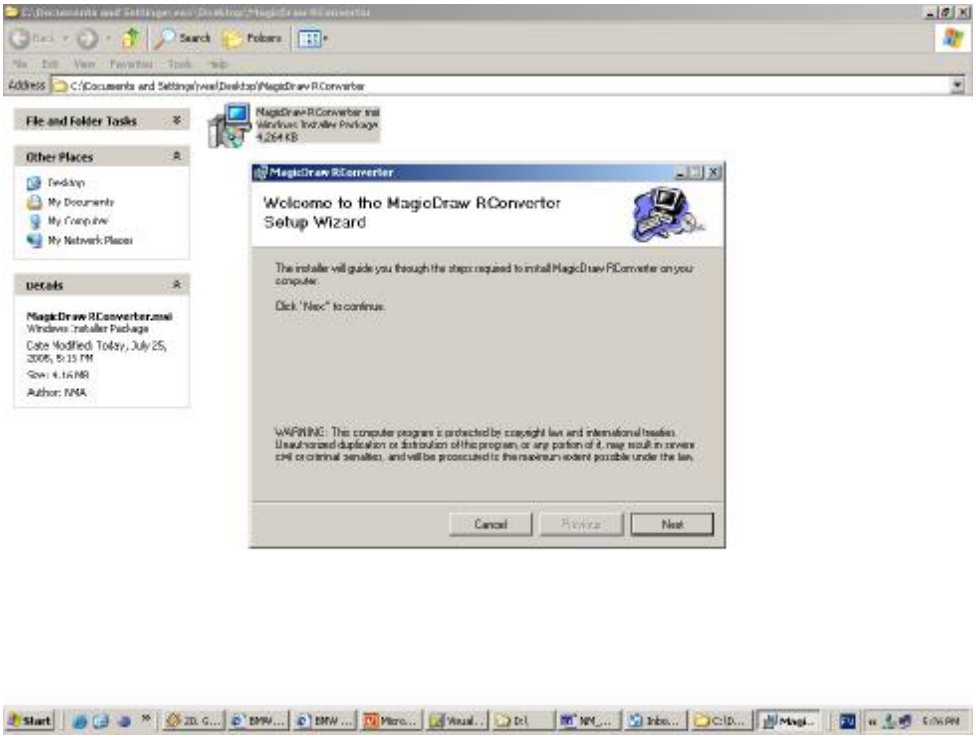


Figure 2 -- Welcome dialog box

STEP #3 License Agreement dialog box pops up, read it and click on “I Agree” then click “*Next*”

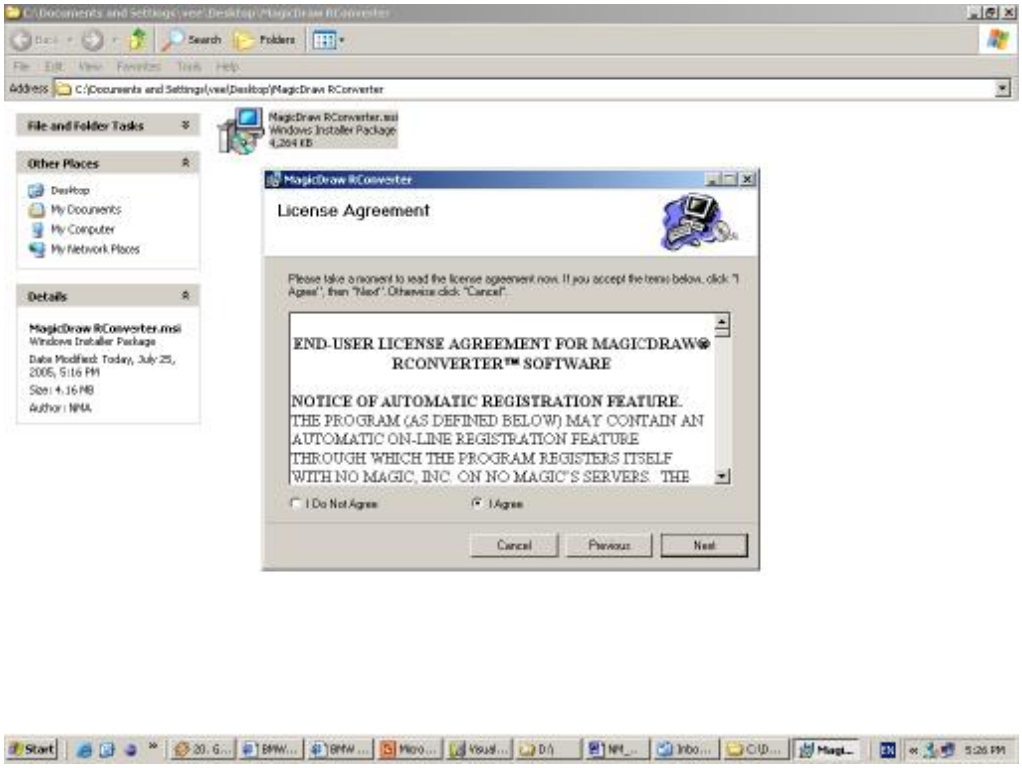


Figure 3 -- License Agreement dialog box

STEP #4 Choose the path where you want MagicDraw RConverter installed. “*C:\Program Files\MagicDraw RConverter\”* in this case

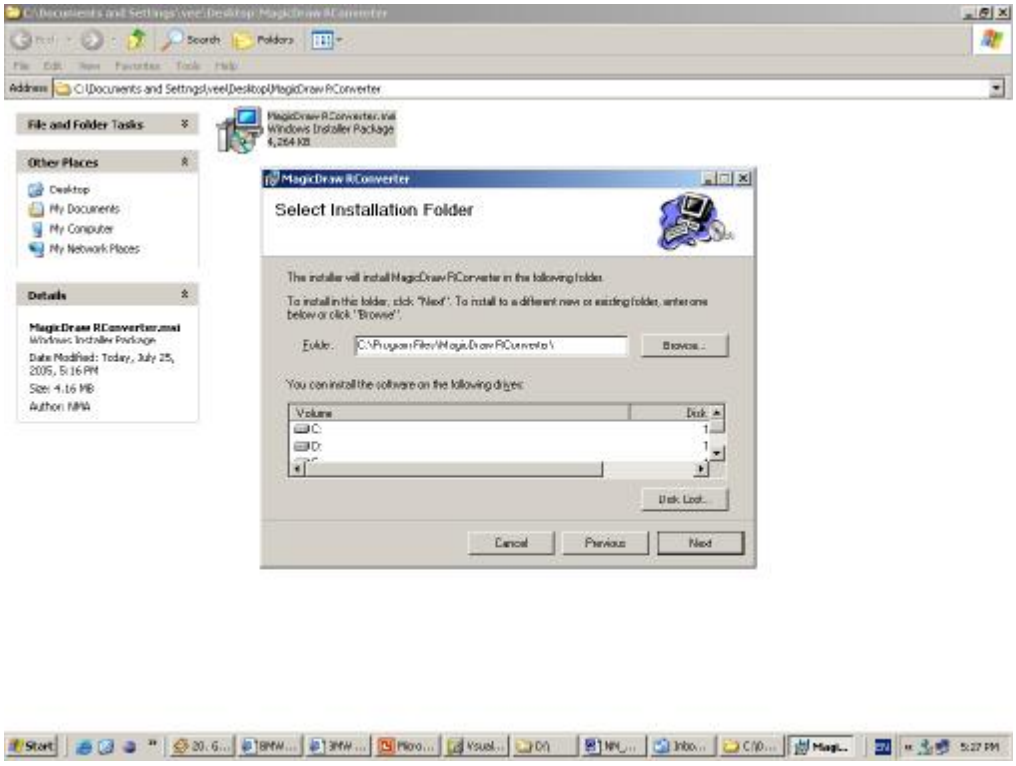


Figure 4 -- Installation path dialog box

STEP #5 Now the installation is ready to begin, click “Next”

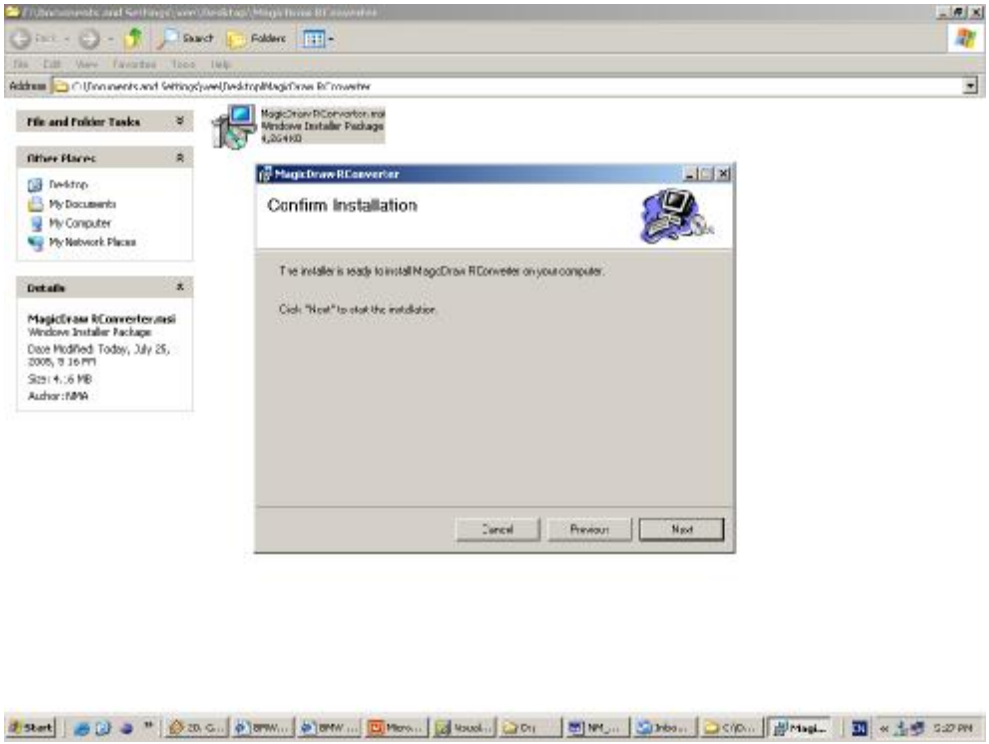


Figure 5 -- Start installation dialog box

STEP #6 The installation in progress

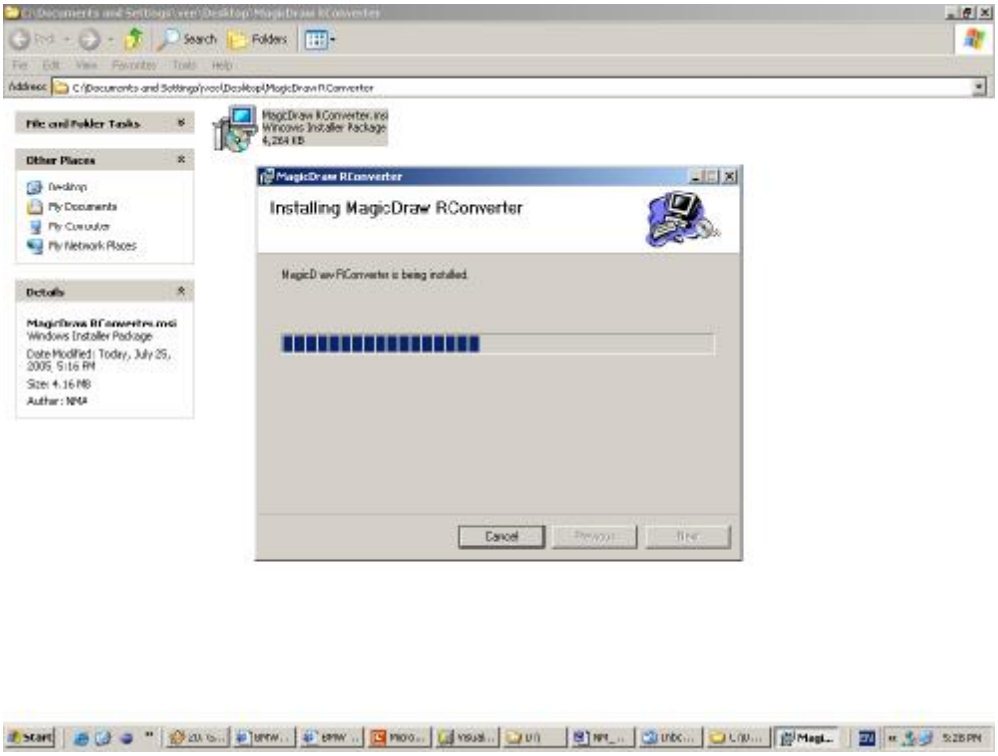


Figure 6 -- Installation in progress dialog box

STEP #7 The dialog box below indicates the successful completion of installation, click "*Close*"

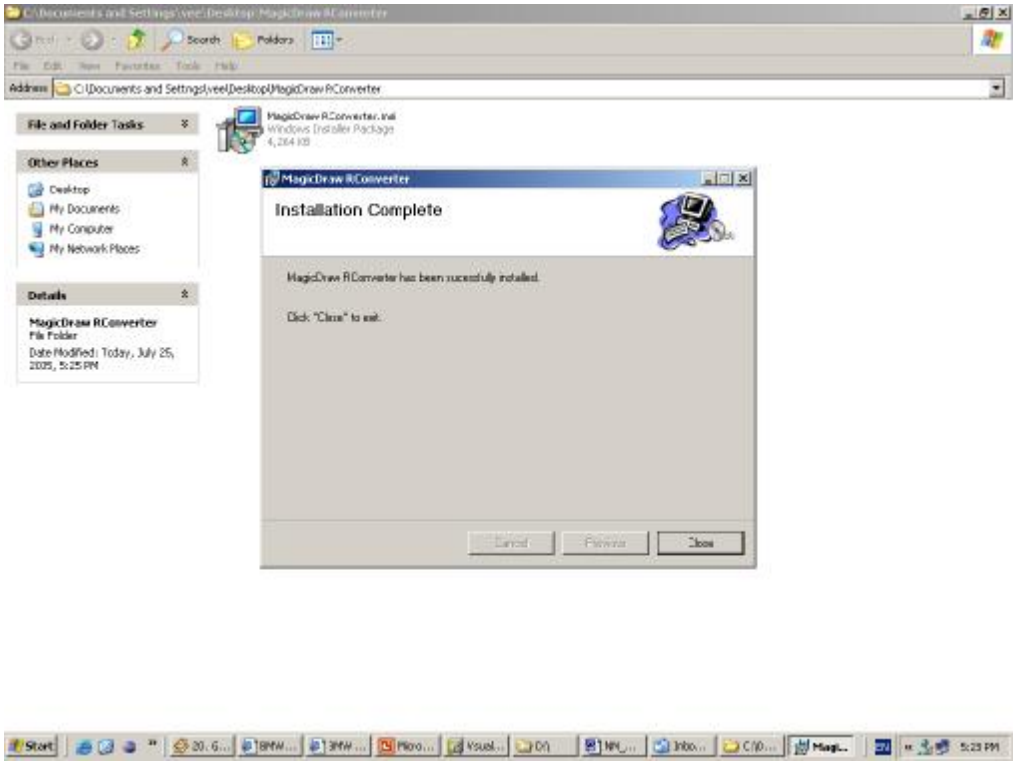


Figure 7 -- Installation complete dialog box

1.4.4. Uninstalling the Application

STEP #1 On *Start Menu,* choose *Control Panel*

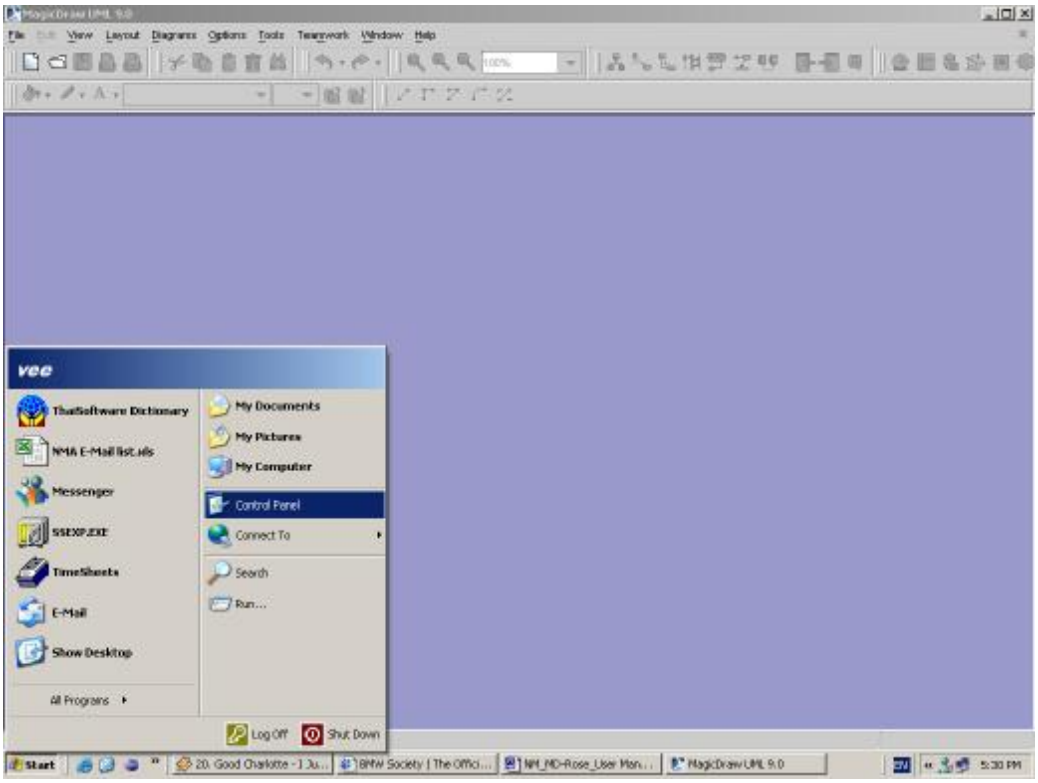


Figure 8 -- Start Menu pane

STEP #2 Choose *Add or Remove Program*

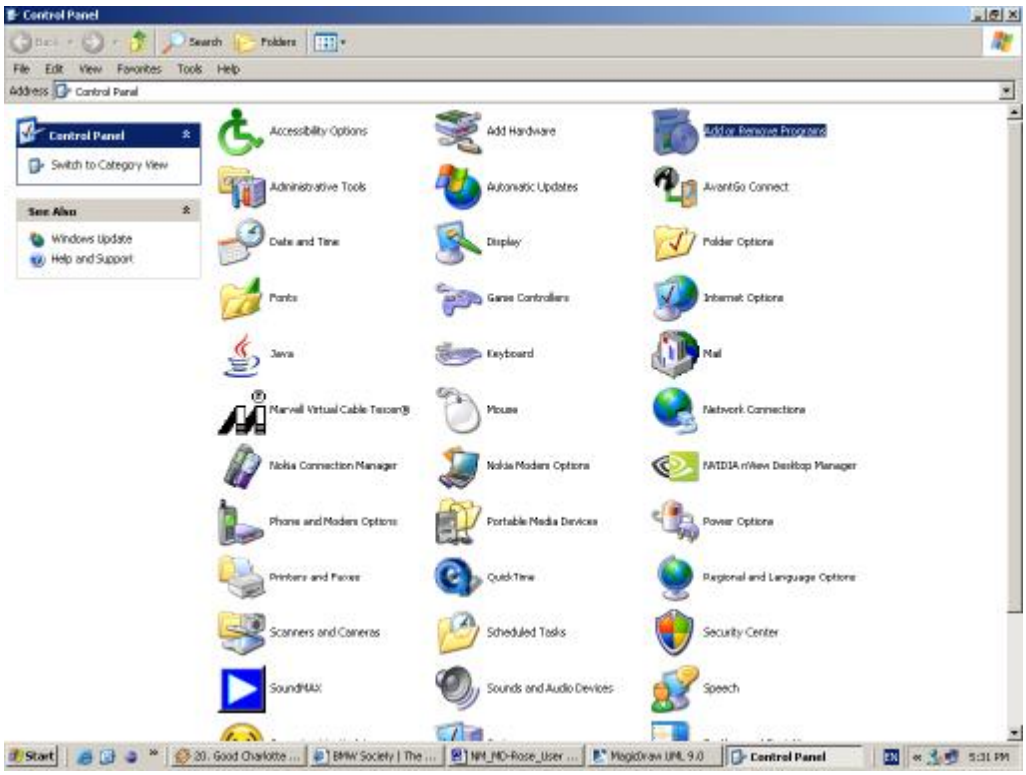


Figure 9 -- Control Panel window

STEP #3 On tab *Change or Remove Program* on your left, select *MagicDraw RConverter 1.0* in the right panel

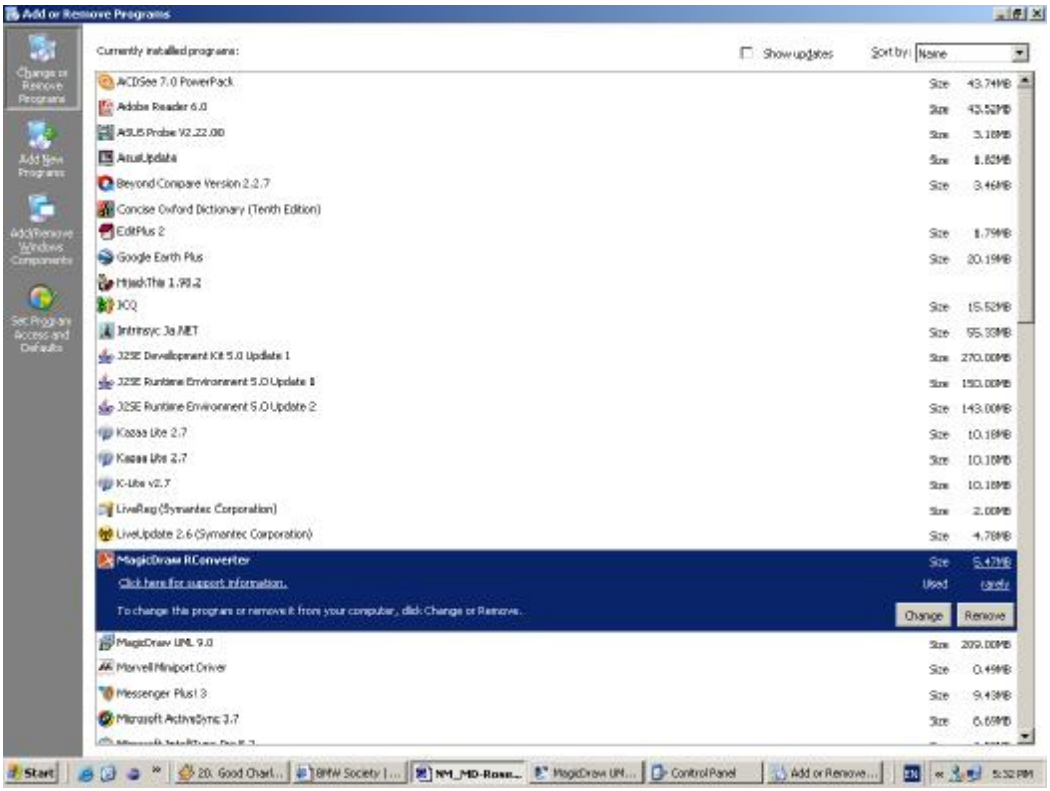


Figure 10 -- Add or Remove Programs window

STEP #4 Click on *Change/Remove* button in order to proceed the uninstallation

STEP #5 System displays a dialog box to confirm the removal of all application's components, click *Yes*

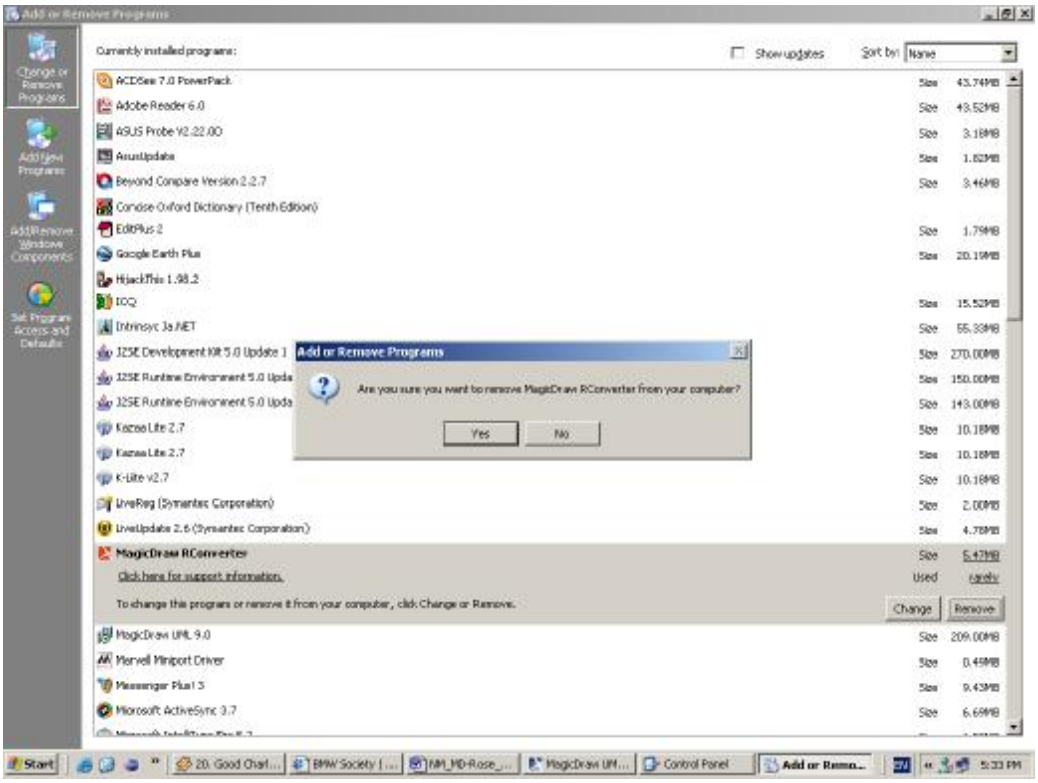

Add or Remove Programs
Currently installed programs:
Show updates
Sort by: Name
Add or Remove Programs
Are you sure you want to remove MagicDraw RConverter from your computer?
Yes
No
MagicDraw RConverter
Click here for support information.
To change this program or remove it from your computer, click Change or Remove.
Change
Remove

Figure 11-- Remove all application's component dialog box

STEP #6 Uninstallation completes

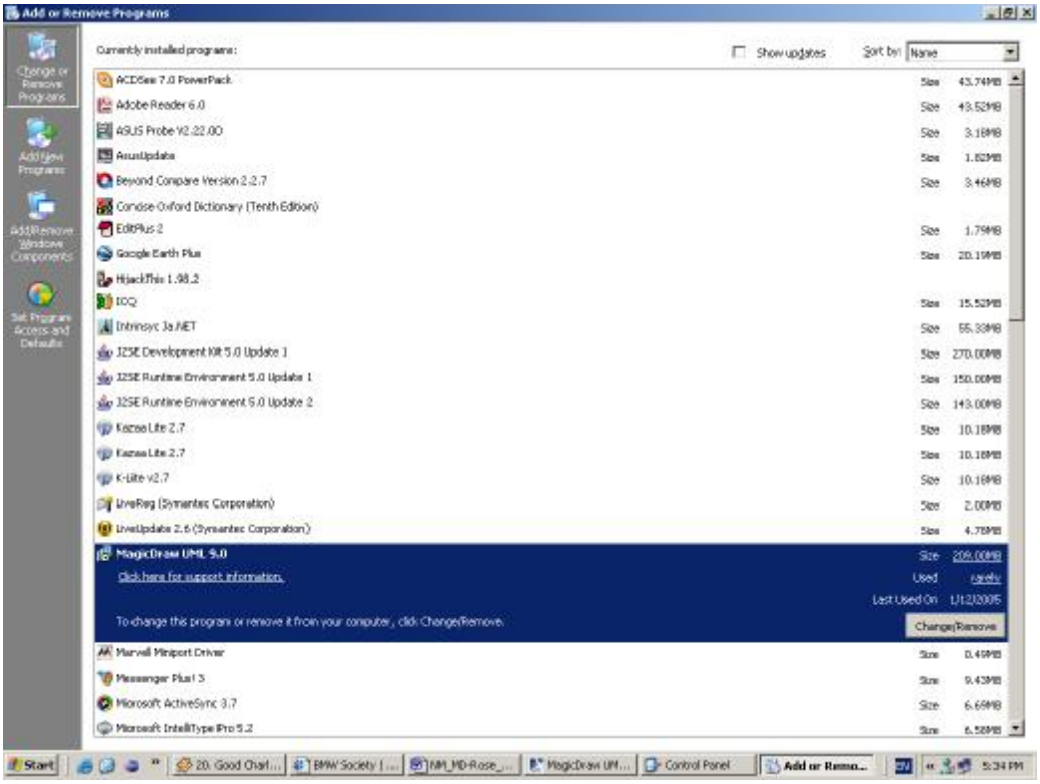

Add or Remove Programs
Currently installed programs:
Show updates
Sort by: Name
MagicDraw UML 9.0
Click here for support information.
To change this program or remove it from your computer, click Change/Remove.
Change/Remove

Figure 12 -- Uninstallation complete

2. Tutorial

This section will walk you through the very easy steps of navigating the facilities and functions of the MagicDraw RConverter tool. Screen capture images are shown to help give you a clear illustration.

STEP #1 On "*Start*" button, click "*MagicDraw RConverter*" from the list of programs

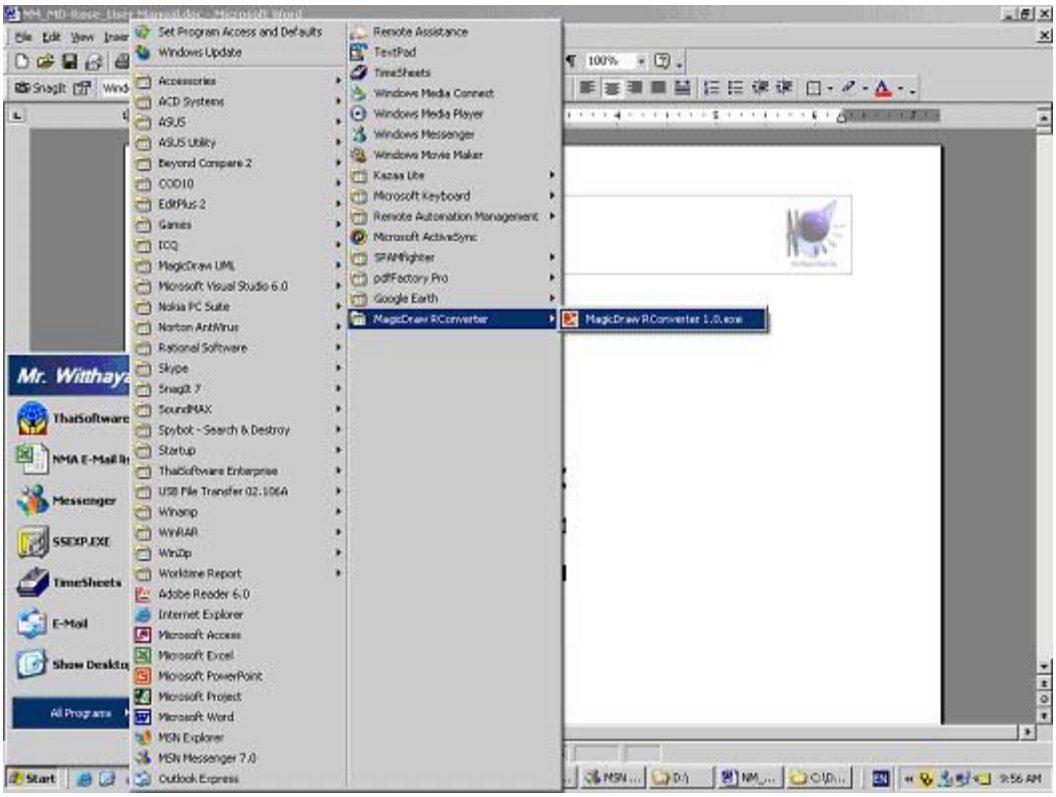


Figure 13 -- Run MagicDraw RConverter1.0

STEP #2 Conversion process is ready to begin

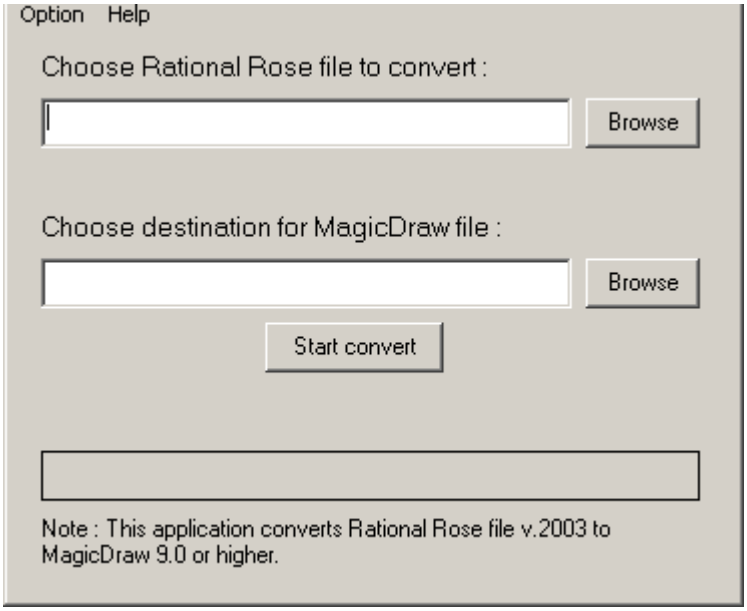

Option Help
Choose Rational Rose file to convert :
Browse
Choose destination for MagicDraw file :
Browse
Start convert
Note : This application converts Rational Rose file v.2003 to MagicDraw 9.0 or higher.

Figure 14 -- Conversion process ready dialog box

STEP #3 Locate the *.mdl file (Rose format file) in the field "*Choose Rational Rose File to convert:*" by clicking on the "*Browse*" button and click "*Open*"

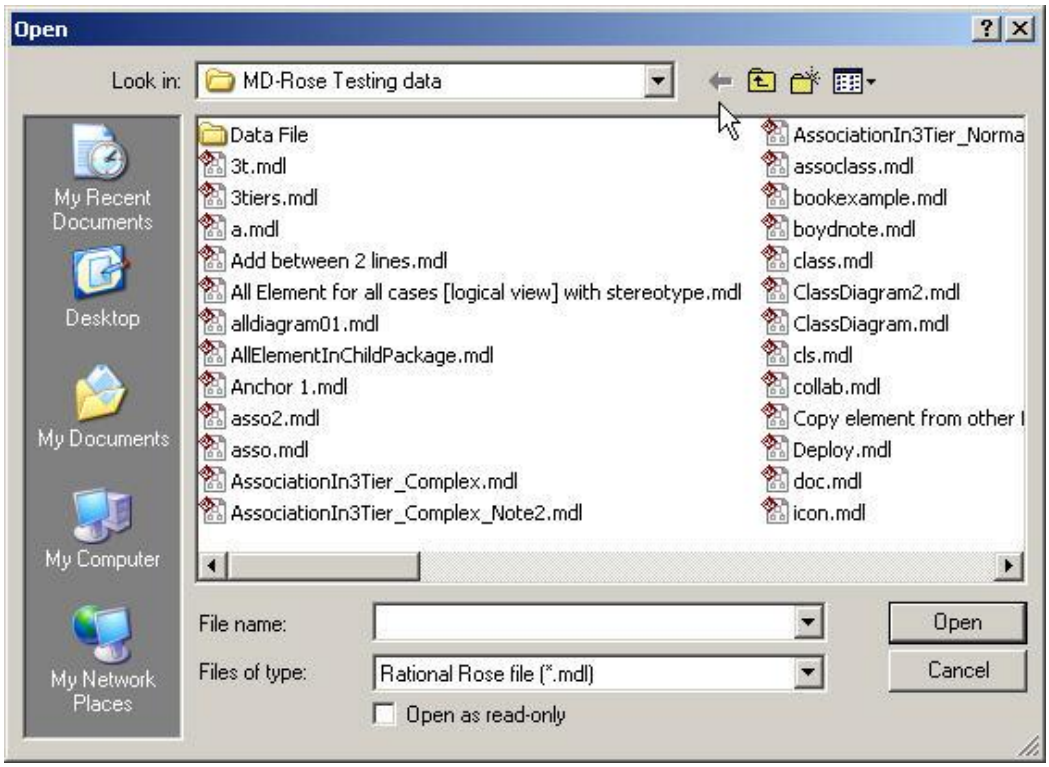


Figure 15 -- Rose's project file (.mdl) file dialog*

STEP #4 The field "*Choose Destination for MagicDraw File:*" will be filled automatically with *.xml file path location in the same folder where the Rational Rose project file was earlier identified. The user can change the location and filename by clicking on the second "Browse" button.

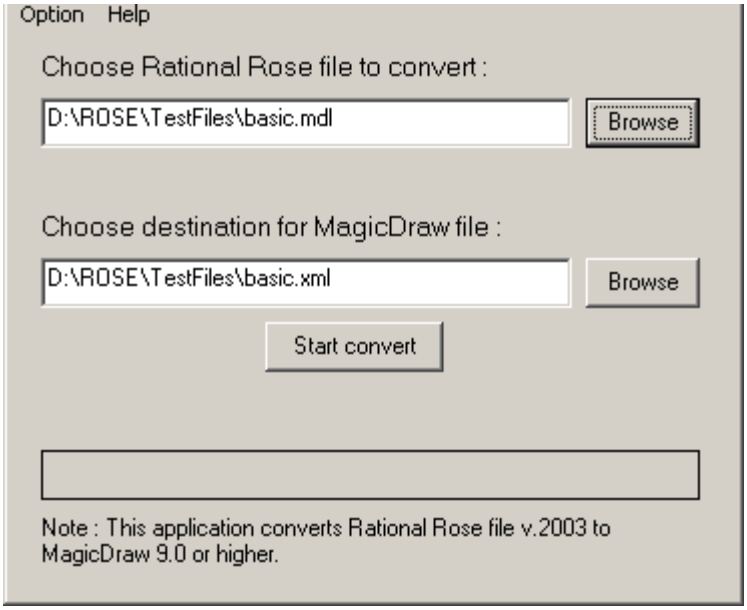


Figure 16 -- Start conversion dialog box

STEP #3 (Optional) Customize Advance Option: MagicDraw Compatibility by clicking menu “Option”, then “Advance Option”, the MagicDraw Compatibility tab will appear.

Due to the structure of UML changing between MagicDraw Version9.5 and Version10.0, some diagram specifications or layout might be different. The Compatibility Option needs you to choose whether to convert for “MagicDraw Version9.5 or lower” or “MagicDraw Version 10.0-11.0”

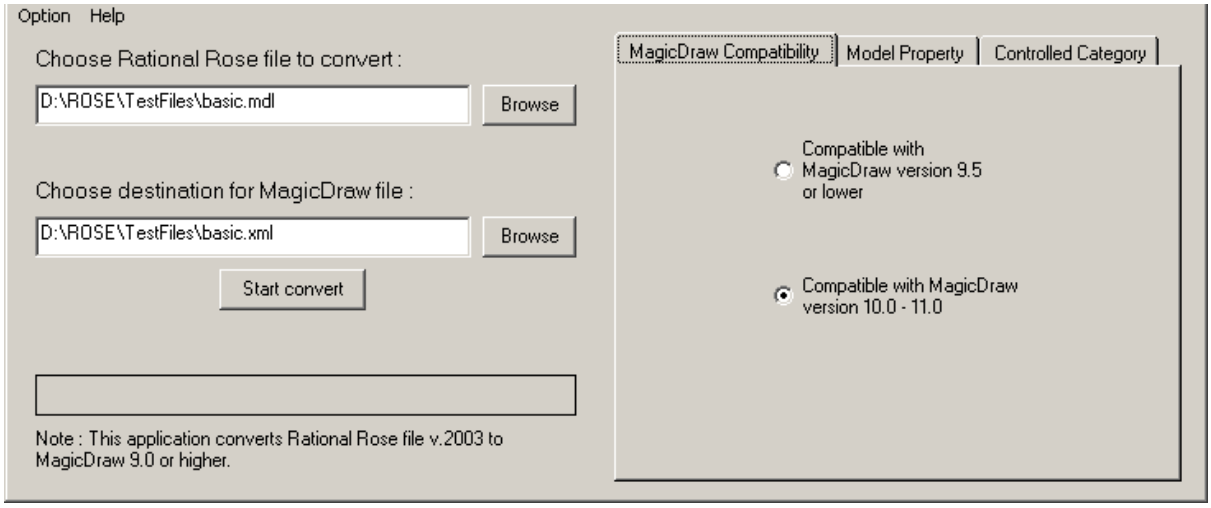


Figure 17 -- Compatibility Option

STEP #4 (Optional) Customize Advance Option: Model Property by clicking menu “Option”, then “Advance Option”, the Model Property tab will appear.

Check the “retrieve Model Properties” checkbox to enable the conversion of Rational Rose Model Properties for each Element.

Check the “add Type Name Suffix” in case the same Model Property Name is applied for many Element Types. The conversion will append the Element Type Name after the Model Property Name to avoid the duplication of Stereotype Name after converting to MagicDraw.

For example, <<Tool1>> stereotype will be duplicated with a different Metaclass property to be applied for Class, Attribute, Operation, etc. After you check “add Type Name Suffix”, the Stereotype name will be <<Tool1_Class>>, <<Tool1_Attribute>>, <<Tool1_Operation>>, and so on.

List the Model Properties you want to retrieve by typing the Tool Name of the Model Properties. The Tool Names have to be listed one name per line.

Remark: In case the Model Properties are not used in the project, the Model Properties Option should be disabled for better performance.

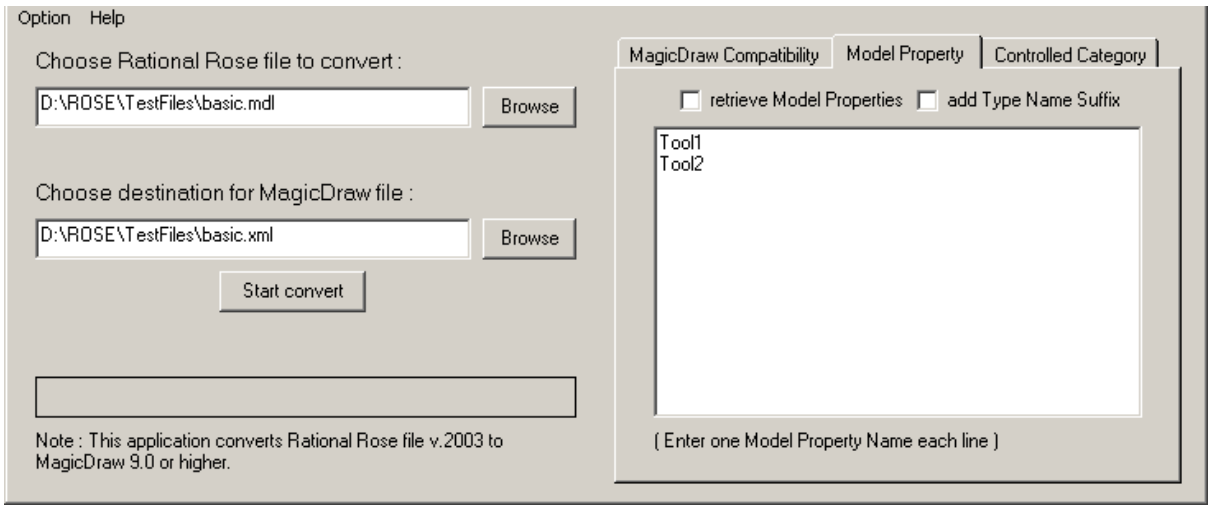


Figure 18 -- Model Properties Option

STEP #5 (Optional) Customize Advance Option: Controlled Category by clicking menu “Option”, then “Advance Option”, the Controlled Category tab will appear.

- To convert every element, the default option will be set to “Convert All”.
- To limit the conversion, after selecting “Convert Selected categories” RConverter will retrieve Category structure and provide a checkbox for the user to select a Category that the user wants to convert. When the user updates the model while using RConverter or when the user changes the source file, the user will have to click the “refresh” button to refresh the Category structure.
    - The gray highlighted categories are the normal categories.
    - The yellow highlighted categories are the Top level or package in Three Tiered Logical Service Model.
    - The categories with no color are the controlled categories.

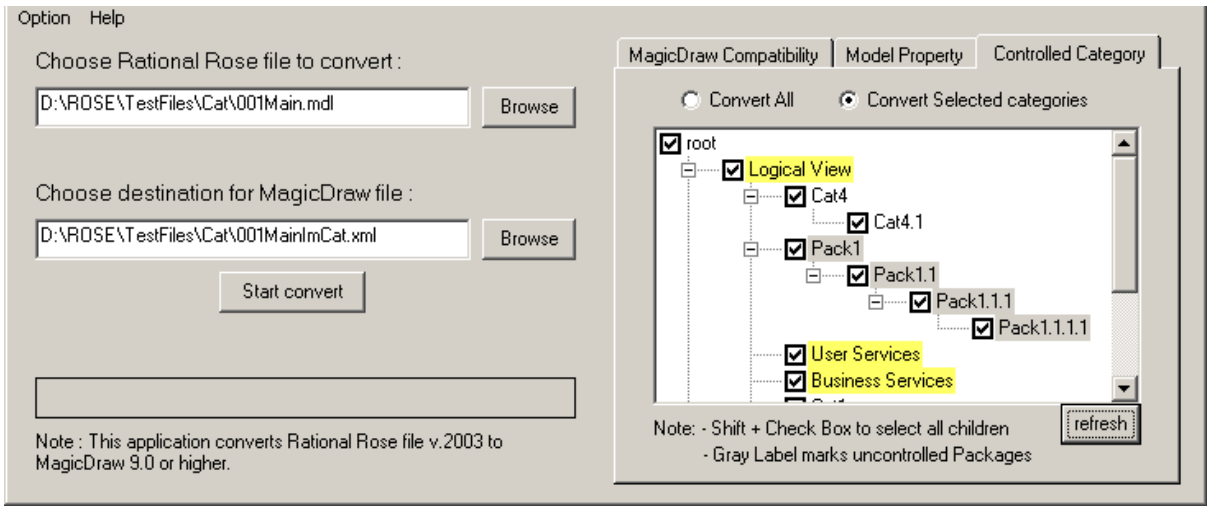


Figure 19 -- Controlled Category Option

STEP #6 Simply start the conversion process by clicking the “Start convert” button.

STEP #7 A Complete dialog box indicates the completion of conversion with duration and “Log” box at the bottom displaying information on mapping keyword for those elements that their name could not be mapped identically.

Figure 20-- File conversion complete dialog box

STEP #8 Repeat from STEP #3 for more files to convert

STEP #9 Run *MagicDraw UML* application

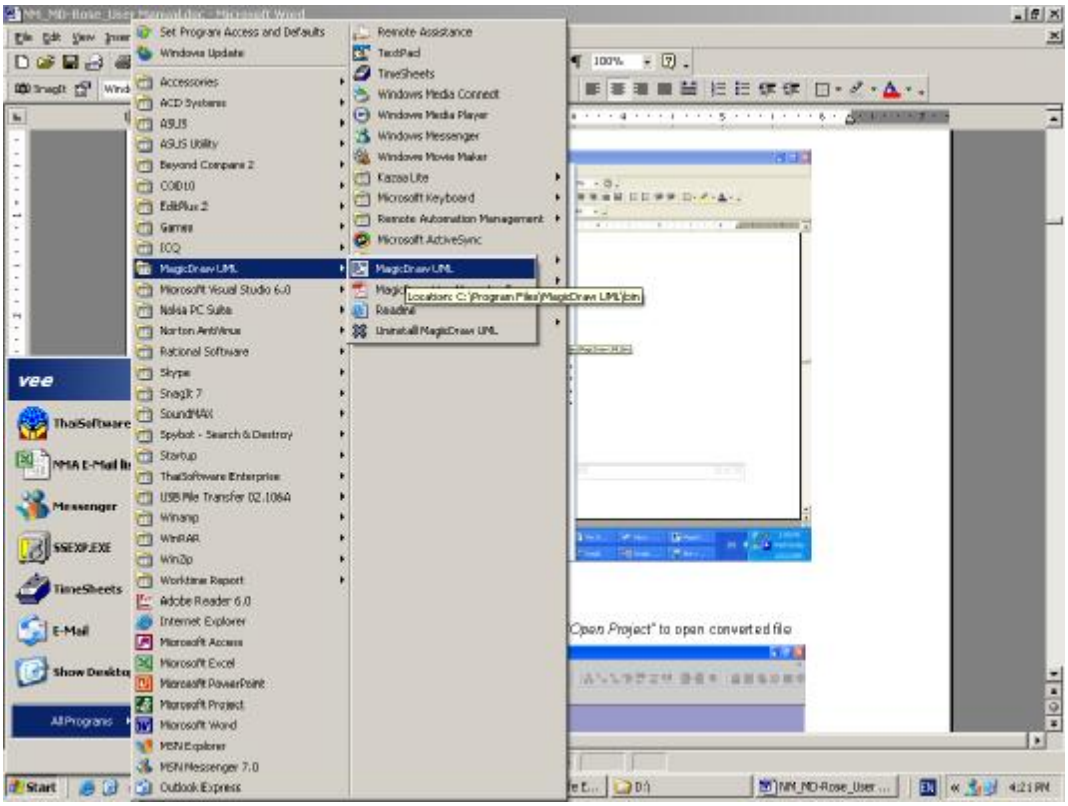


Figure 21 -- Open MagicDraw

STEP #10 Choose “*File*” from the menu bar and click on “*Open Project*” to open a converted file.

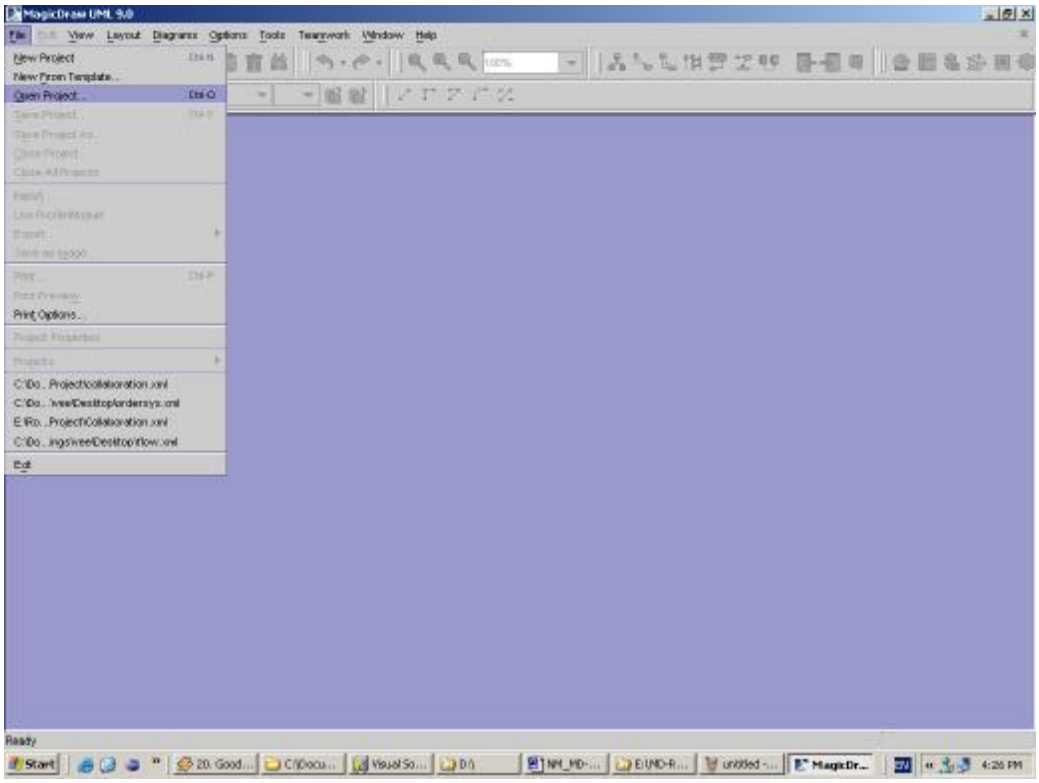


Figure 22 -- Open file pane

STEP #11 Place the converted *.xml file location where the converted file is located.

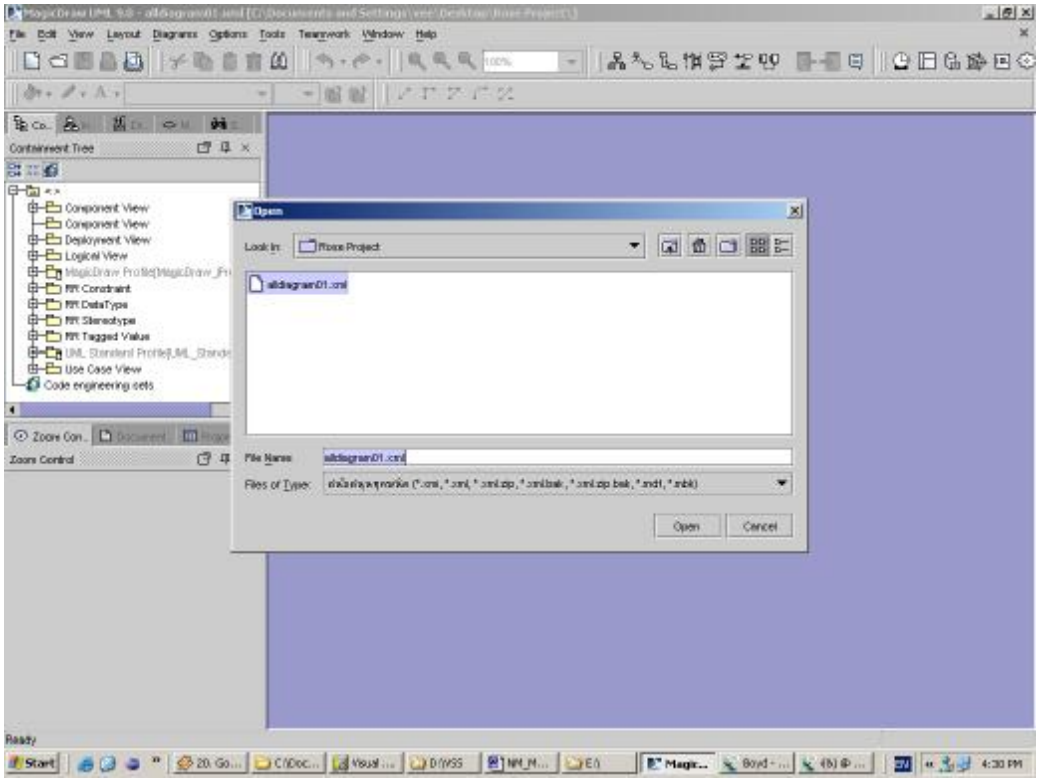


Figure 23 -- Browsing file dialog box

STEP #12 MagicDraw 9.0 is retrieving file to open

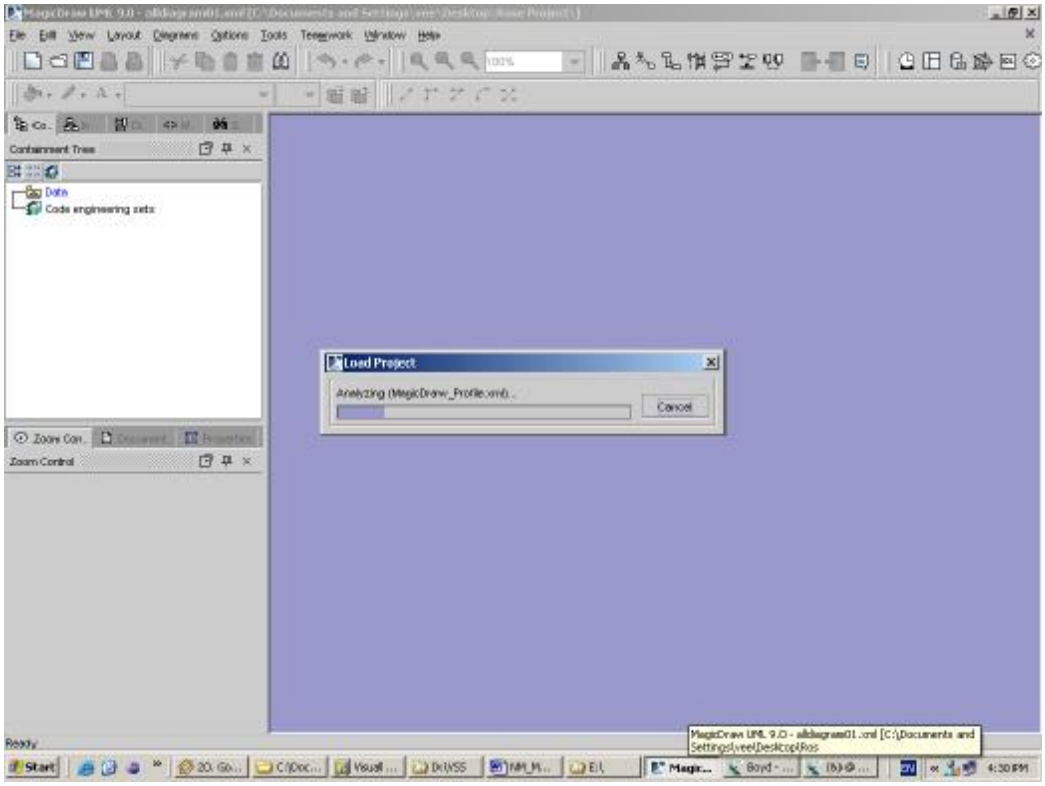


Figure 24-- Loading converting file

STEP #13 All Rose diagrams are displayed in the left pane on screen

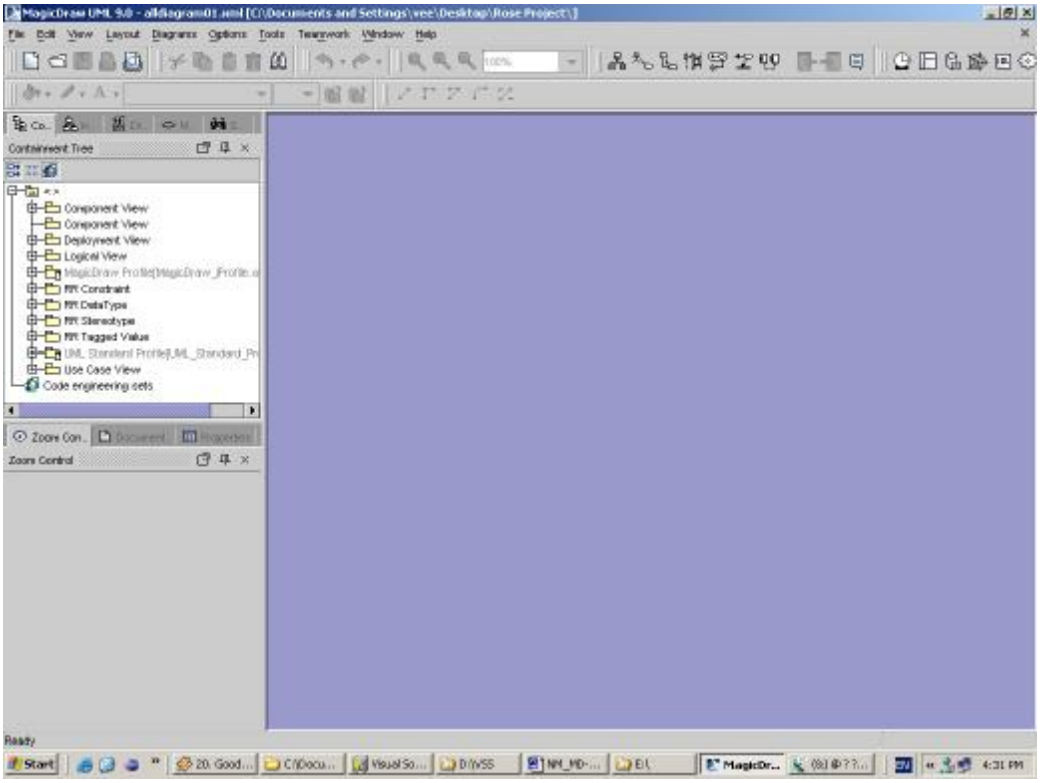


Figure 25 -- Rose Diagram displayed

3. Enter License Key

The system initially comes with Evaluation License that has limitation of 50 elements and 30 days trial period. Once a user acquires a User Name and the License Key, this will be a window that user will apply the License Key to the system.

3.1. How to enter License Key

Step #1 Choose Help menu and then choose Enter License Key.

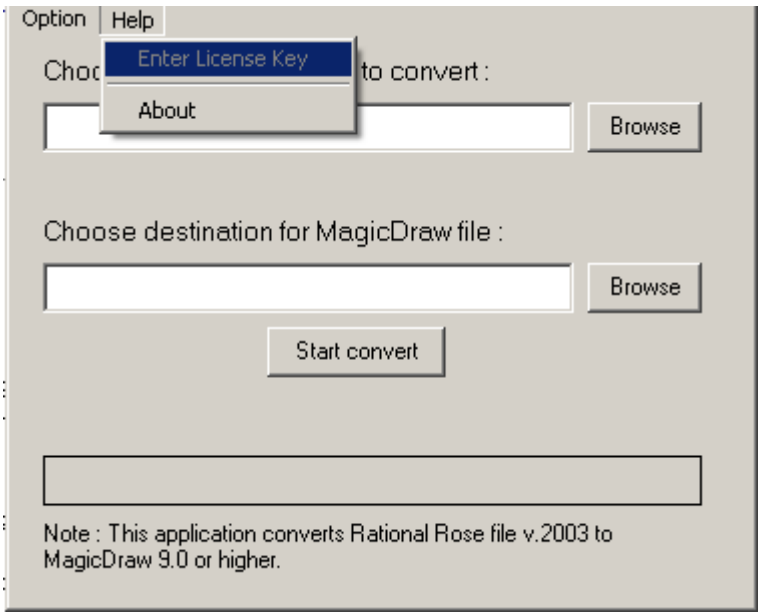


Figure 26 -- Enter License Key Menu

Step #2 Enter your User Name and License Key into the text box provided.

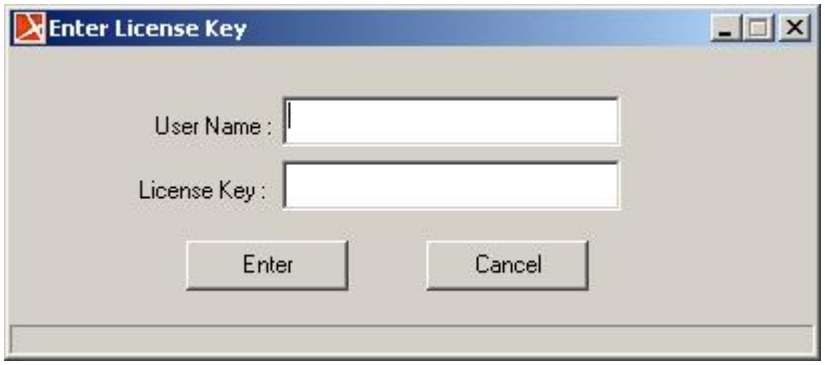


Figure 27 -- Enter License Key Window

Step #3 Click Enter button to verify User Name and License Key.

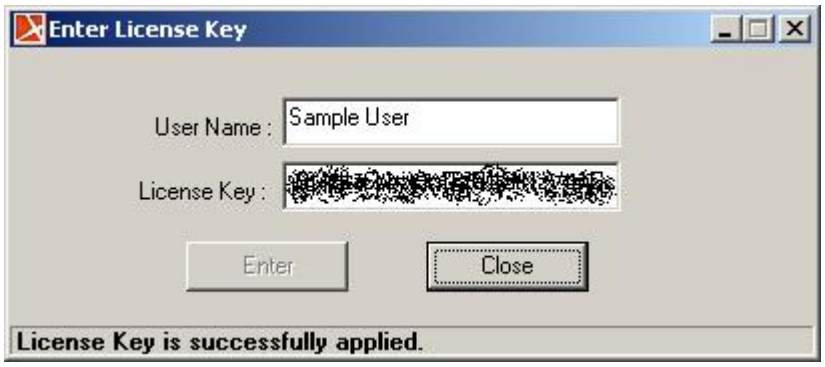


Figure 28 -- Verify License Key

3.2. Result of entering the License Key

There are 4 possible results of Entering License Key.

- “Please fill in both User Name and License Key.” will appear in status bar when user does not fill both User Name and License Key.
- "This License Key has already been applied." will appear in the status bar when user enters the License that has been used before.
- "Invalid License Key." will appear in the status bar when user enters wrong User Name or License Key.
- "License Key is successfully applied." will appear in the status bar when user enters the correct User Name and License Key. Then the Enter button will be disabled and Cancel button will change to Close for user to close the Enter License Key Window.

4. Message Dialog Box

4.1. Conversion Complete Popup

This is the popup screen indicating that the conversion completes.

Figure 29 -- Conversion Complete Popup dialog box

Note: The conversion process needs not done with bug.

4.2. Conversion Alert Popup

Each alert dialog box indicates the incomplete of the conversion. Message shows what difficulty may cause the error.

4.2.1. Required Field Alert

This is the popup screen indicating that the required fields need to be filled.

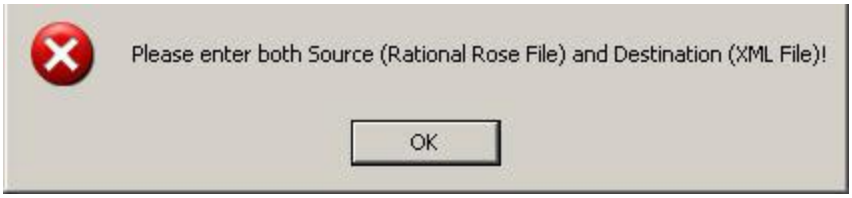


Figure 30 -- Required Field Alert dialog box

Note: The system found that the required files location information is not completed.

4.2.2. Source File Type Alert

The system has found that the source file type entered is not Rose-supported (*.mdl).

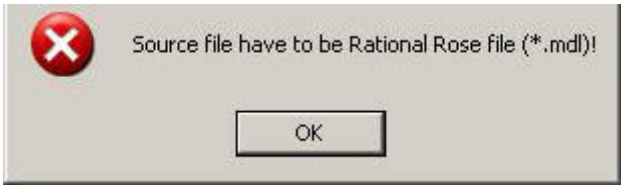


Figure 31 -- Source File Type Alert dialog box

4.2.3. Source File Not Exist Alert

This is the popup screen indicating that the indicating source file does not exist.

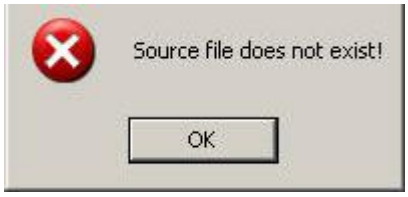


Figure 32 -- Source File Not Exist Alert dialog box

4.2.4. Source File in Use Alert

The system found that other process may be using the source file.

Figure 33 -- Source File in Use Alert dialog box

4.2.5. Access to Source Folder Alert

The system has found that the user does not have *write* permission to the source folder. The user must have right permission to access the source folder in order to convert the source file.

Figure 34 -- Access to Source Folder Alert dialog box

4.2.6. Target File Type Alert

The system has found that the target file type entered is not MagicDraw-supported file format (*.xml).

Figure 35 -- Target File Type Alert dialog box

4.2.7. Destination Drive Not Exist Alert

The system has found that the destination drive entered does not exist.

Figure 36 -- Destination Drive Not Exist Alert dialog box

4.2.8. Network Destination Folder Not Exist Alert

The system has found that the network destination folder entered does not exist.

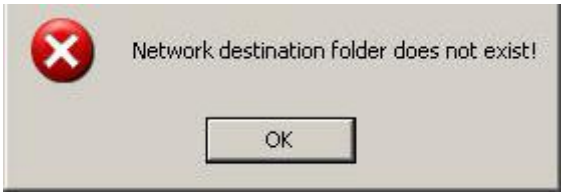


Figure 37 -- Network Destination Folder Not Exist Alert dialog box

4.2.9. Access to Destination Folder Alert

Access to destination folder is denied. The destination folder might be write-protected.

Figure 38 -- Access to Destination Folder Alert dialog box

4.2.10. ActiveX component can't create object Alert

Figure 39 -- ActiveX component can't create object Alert Dialog Box

4.2.11. PredefinedStereotypes.xml corrupted Alert

Figure 40 -- PredefinedStereotypes.xml corrupted Alert Dialog Box

4.2.12. Unexpected error Alert

Figure 41 -- Unexpected error Alert Dialog Box

4.2.13. Target File Replace Alert

The system has found that the target file entered already existed and then asked for consideration to replace.

Figure 42 -- Target File Replace Alert dialog box

4.2.14. Unnamed Package Alert

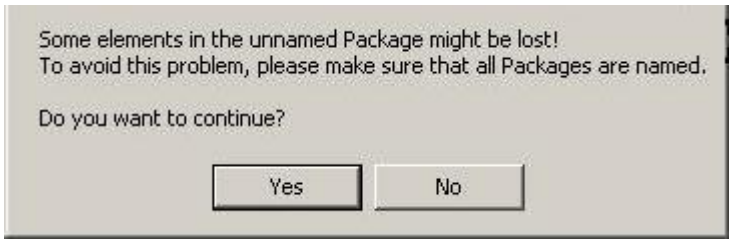

Some elements in the unnamed Package might be lost!
To avoid this problem, please make sure that all Packages are named.
Do you want to continue?
Yes
No

Figure 43 -- Unnamed Package Alert dialog box

4.2.15. Unnamed Use Case Alert

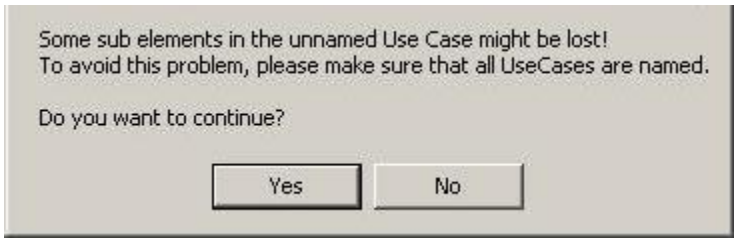

Some sub elements in the unnamed Use Case might be lost!
To avoid this problem, please make sure that all UseCases are named.
Do you want to continue?
Yes
No

Figure 44 -- Unnamed Use Case Alert dialog box

4.2.16. Element Limit Alert

The system has counted the elements in model that are being converted. And if the numbers of elements exceed the limit for the current License applied to the system, this alert will display.

Figure 45 -- Element Limit Alert dialog box

4.2.17. License Alert

The system has detected that the time limited by License Key has expired. Or the license key is invalid for current version. Thus, the Convert button on the application will be disabled, when it expires.

Figure 46 -- License Alert dialog box

4.2.18. Package Filter alert

The Top Level Category or Category in Three Tiered Logical Service Model is filtered out. The Rational Rose Model do not allow to filter those categories from model.

Filtering the package in Three Tiered Logical Service Model or Top Level packages (yellow node) could cause an conversion problem.
OK

Figure 47 -- Package Filter Alert dialog box

Performance Testing

The graph drawn below shows the relationship between time and number of element.

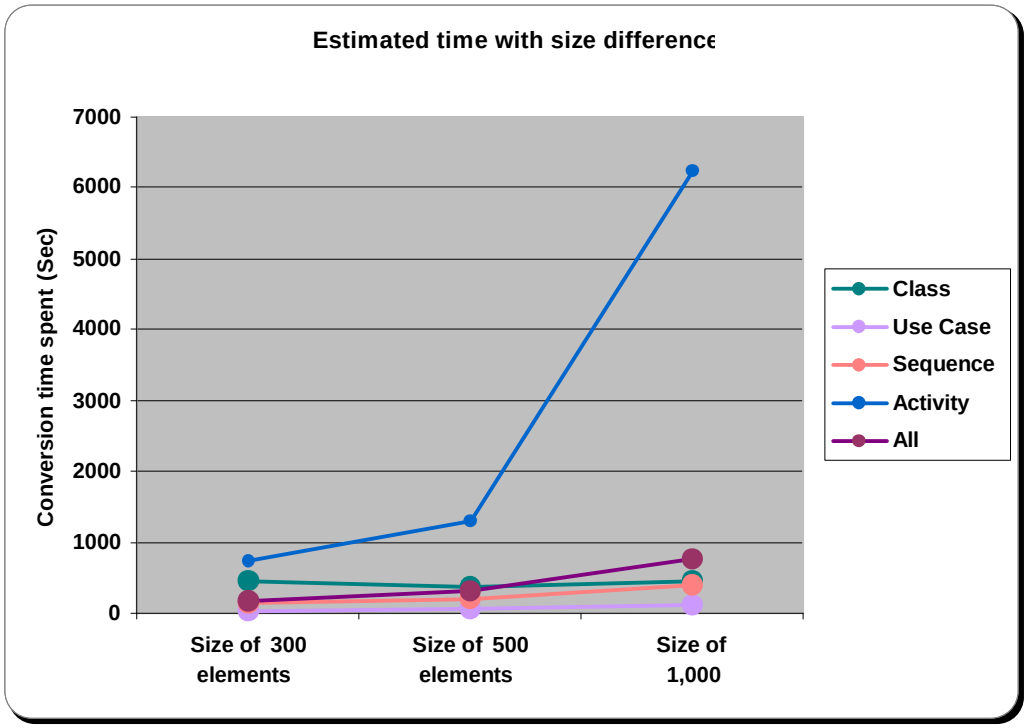


Figure 48 -- Performance Testing Graph

5. Constraint

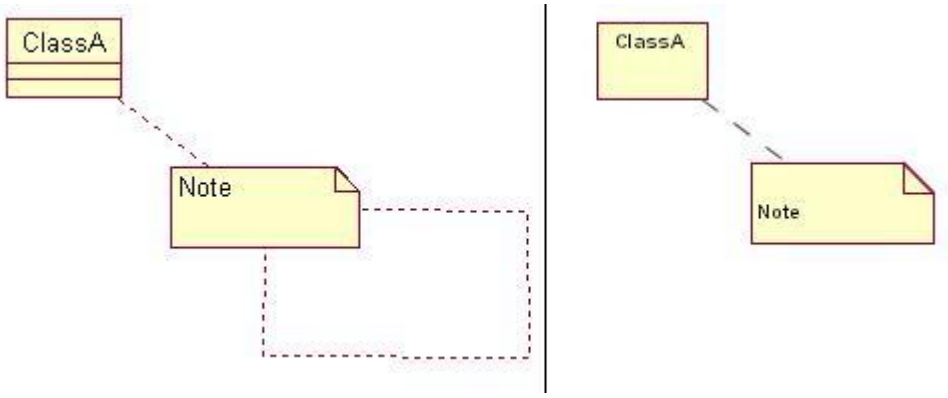
5.1. Anchor Note to Item

5.1.1. Geometry

Geometry of Anchor Note to Item will be changed and the line color will be ignored (use MD default color)

5.1.2. Self-attached Anchor Note to Item

Self-attached anchor note to item (first end element is equivalent to second end element) will be removed.

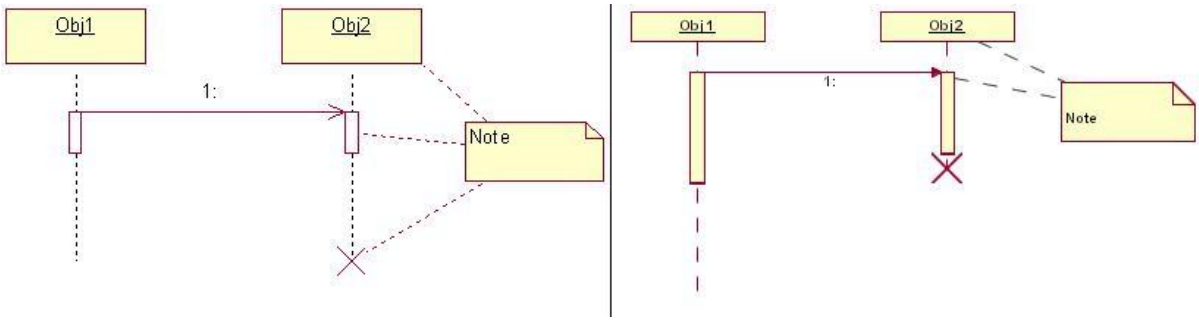


Rational Rose MagicDraw

Figure 49 -- Self-attached Anchor Note to Item

5.1.3. Links between Note and Destruction Marker

Anchor Note to Item that links between Note and Destruction Marker in Sequence Diagram will not be depicted because MagicDraw merely considers Destruction Marker as a property of Message, not a diagram item.

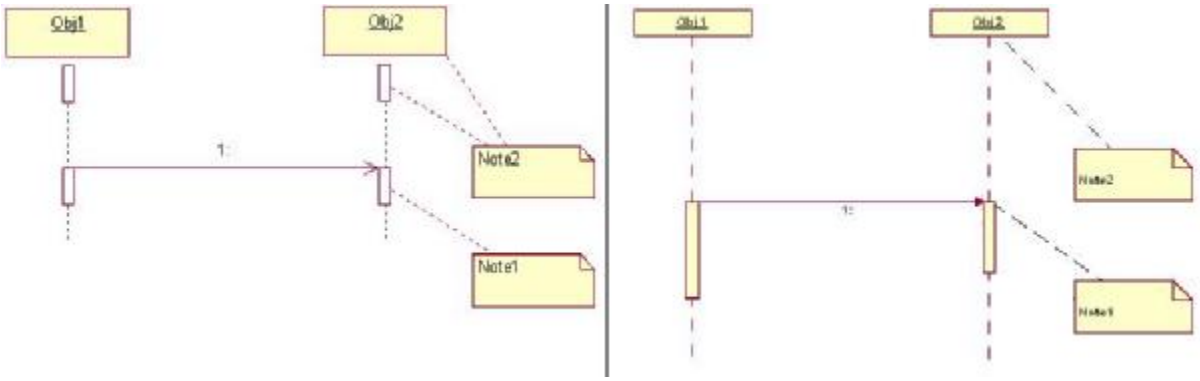


Rational Rose MagicDraw

Figure 50 -- Anchor Note to Item that links between Note and Destruction Marker

5.1.4. Links between Note and Activation bar

Anchor Note to Item that links between Note and Activation bar without message will not be depicted because activation itself will also not be displayed.



Rational Rose MagicDraw

Figure 51 -- Anchor Note to Item that links between Note and Activation bar without message

5.2. Association Class

Association Class's geometry will be changed and line color will be ignored (use MD default color).

5.3. Generalization Name

Due to the Specification of UML2.0 Standard, Generalization name is removed.

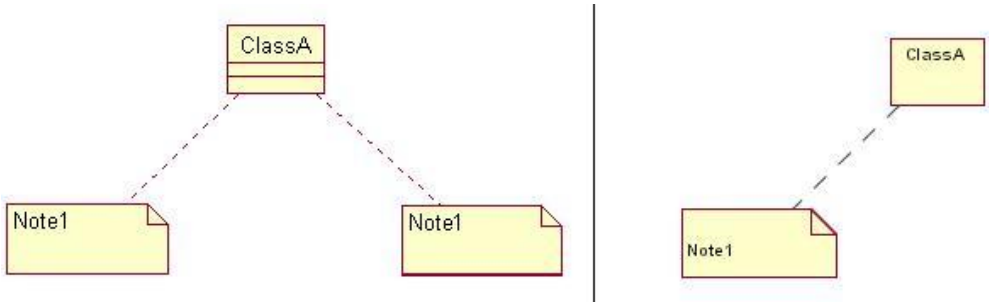
5.4. Note

5.4.1. Links between Note and Association Class

Notes' Anchor to note attached with "association class" (Link Attribute) will disappear when model is converted to mdl format.

5.4.2. Note that have the same content

Notes that have the same content will be considered identical and only one note remains.

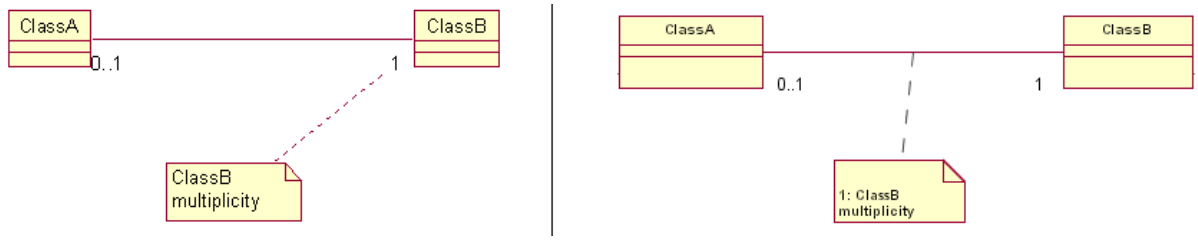


Rational Rose MagicDraw

Figure 52 -- Notes that the same content

5.4.3. Links to Association TextBox

Notes attaching to Association TextBox, small text box that describes Association properties such as multiplicity, Association name, stereotype, etc., will be connected to Association itself instead and message in those notes will be appended with the textbox message in front of it as in the picture shown below.



Rational Rose MagicDraw

Figure 53 -- Notes attaching to Association TextBox

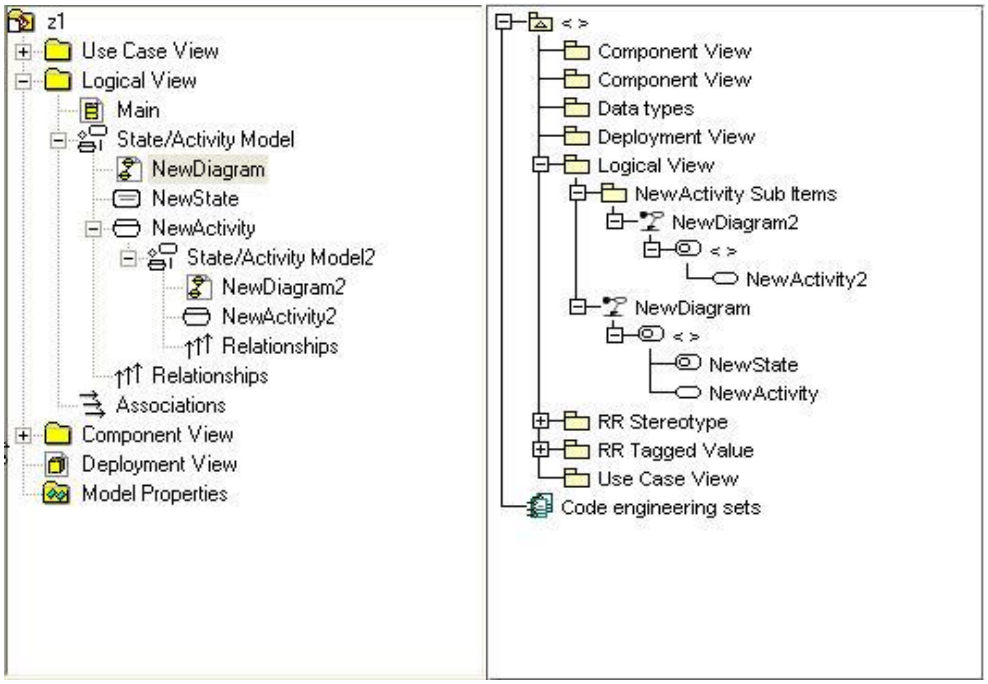
5.5. Stereotype Display

The icon symbol of some stereotypes, which are defined in Rational Rose but not in MagicDraw, will be captured and used as icons for new stereotypes in MagicDraw. Consequently, if diagram from Rational Rose is composed of items that use such stereotypes when diagram is converted to MagicDraw format, those items will lose the ability to change filled or line color.

5.6. Activity Diagram and State Diagram

5.6.1. Sub Items and Subs Diagram

In Rational Rose, State and Activity element can contain sub items and sub diagrams. When user converts them to Magic Draw, it generates package named "<Activity name or State name> + Sub Items" on the same level as the parent diagram located and the sub diagram is stored in this package. The example is below.



Rational Rose MagicDraw

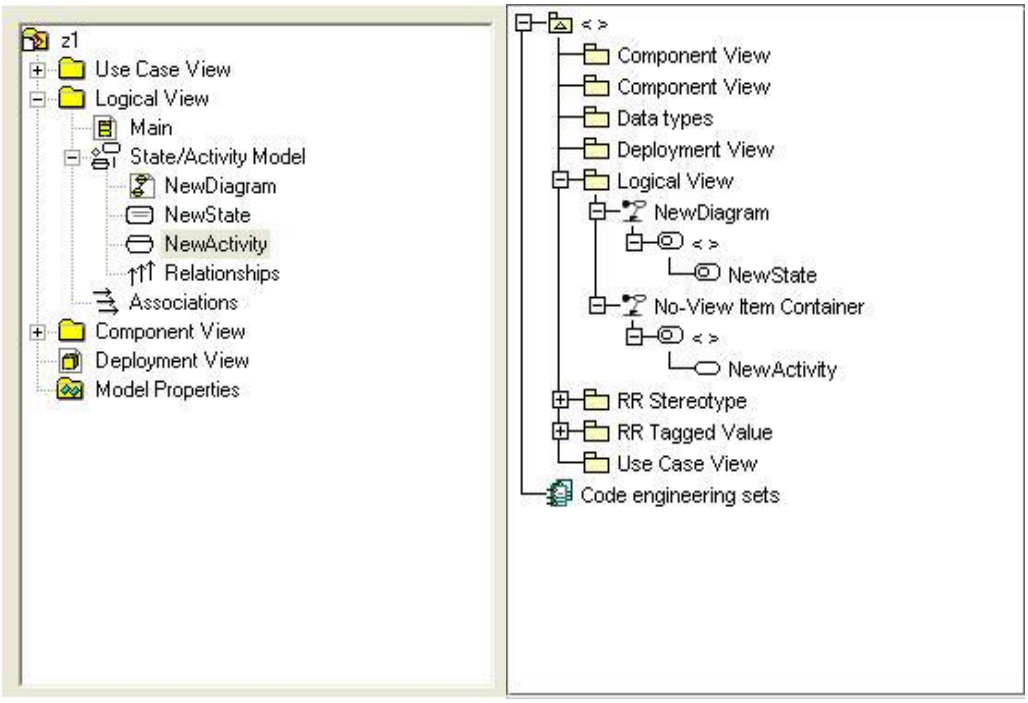
Figure 54 -- Sub Item and Sub Diagram

And if the action has sub diagrams, then that action will create hyperlinks to those sub diagrams and set active to the first available one.

5.6.2. Symbols that does not contain in diagram

In Magic Draw, the symbols in activity diagram and state diagram cannot exist without diagram (Rational Rose is able). So the converter has to create a new diagram to store them, namely “No-View Item Container”, on the same level as the parent diagram of symbols. The example is below.

In this case, let’s assume that “New Activity” Activity is not shown in any diagram in “State/Activity Model” State Machine

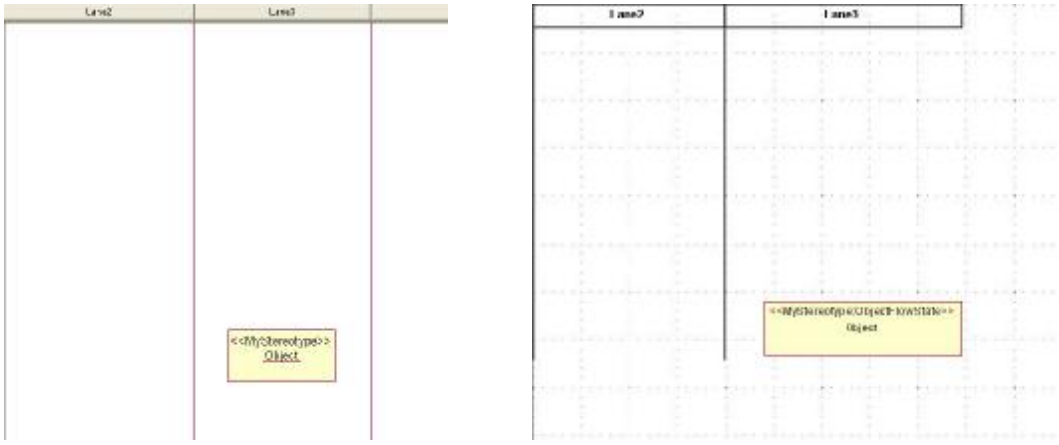


Rational Rose MagicDraw

Figure 55 -- Symbols that does not contain in diagram

5.6.3. Transparent Swimlane

The line of Swimlane may be transparent if the item position is out of Swimlane boundary, this case may be occurred in several ways. For example, if the user converts Object with its stereotype in Rational Rose, after finish conversion, the stereotype will be added with base class as a suffix. So the width of Object is out of Swimlane boundary, then the line of Swimlane will be transparent but when you click the Swimlane it will be highlight. This case can be solved by expanding the width of Swimlane sufficiently before conversion.



Rational Rose MagicDraw

Figure 56 -- Transparent Swimlane

5.6.4. ObjectFlow

Sometimes, the API of ObjectFlow may fail to retrieve the source and the destination. It causes the failure to load ObjectFlow. So if the API of ObjectFlow can't retrieve the source or the destination of ObjectFlow, the ObjectFlow won't be shown.

5.7. User-defined Stereotype

The user can make their own stereotype, and it is perfectly fine. The problem arises when those names are identical with the predefined. What the program does is that, it converts to exact name as it was previously defined under one condition, the based class might not be in the scope. For example, if the user defines stereotype as "entity" for an element "component" in Rational Rose, when conversion is made, the stereotype "entity" happens to locate there for the component as expected but notice that its based class is "class", not "component" but applicable.

5.8. RR Tagged Value Folder

This folder is filled with newly defined tagged value names that later will be referenced to.

5.9. RR Stereotype Folder

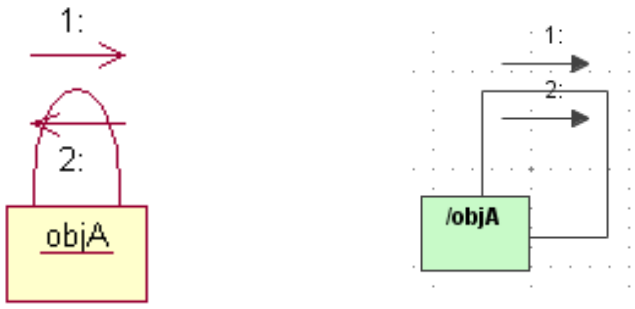
This folder is filled with newly defined stereotype that later will be referenced to.

5.10. Component's Realize

Realizes Visibility is, by default, set to "private" since all item assigned to the list of realizes has the visibility value set "private" initially. Also noted that "Language" has been ignored.

5.11. Collaboration Diagram

5.11.1. Direction of the message



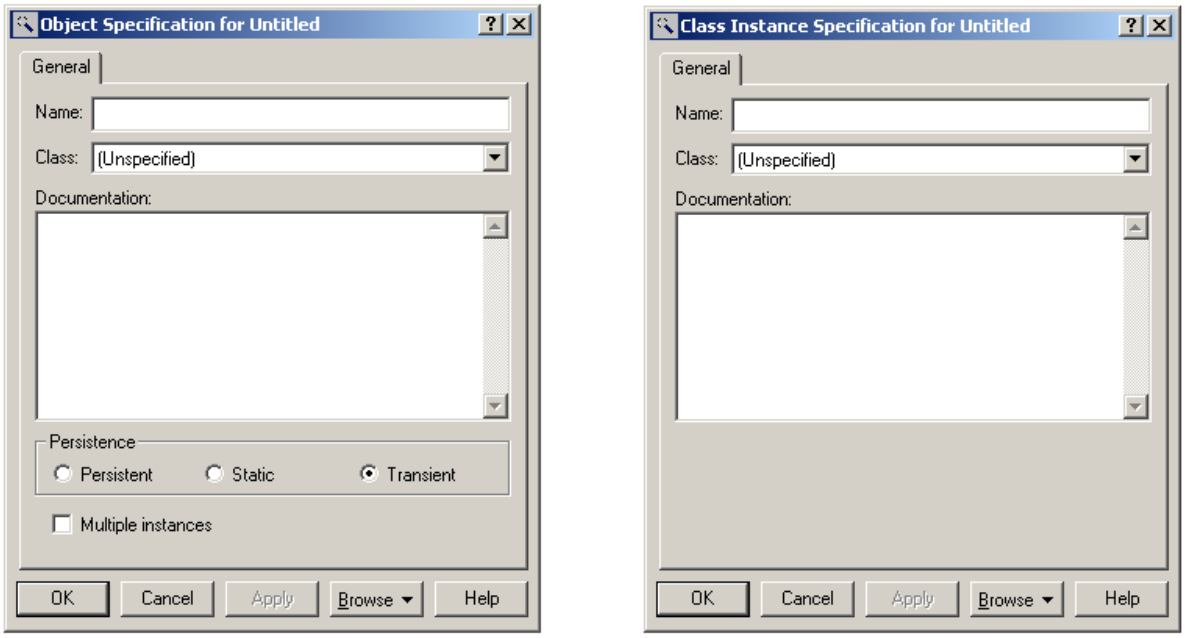
Rational Rose MagicDraw

Figure 57 -- Direction of the message

In case of link to self, the conversion program does not concern about the message's direction.

MagicDraw uses element ID (sender ID and receiver ID) to specify message's direction. In this case, element ID (sender ID and receiver ID) is the same ID so we do not concern about the direction of the message.

5.11.2. Persistence's value of Class Instance



Rational Rose's Object

Rational Rose's Class Instance

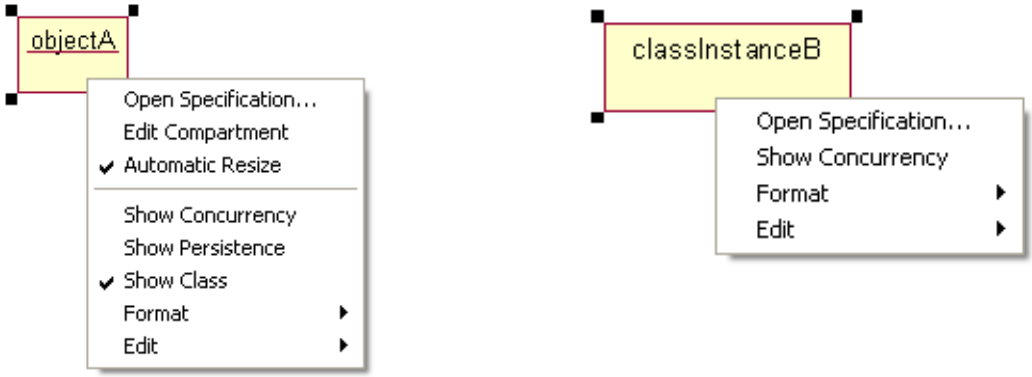
Figure 58 -- Persistence's value of Class Instance

In case of Persistence's value of Class Instance, the conversion program will only set it to default value (persistence = False)

Rational Rose's REI cannot specify elements which are Object and Class Instance.

For Class Instance the conversion program will get default value of Persistence that is transient and set it to that element.

5.11.3. Ignorance of Show Concurrency, Show Persistence and Show Class Properties



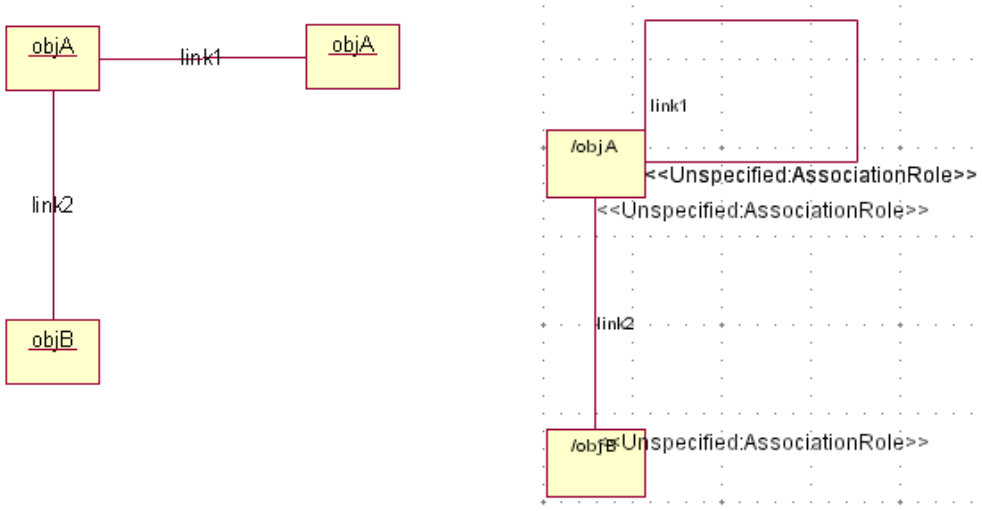
Rational Rose's Object

Rational Rose's Class Instance

Figure 59 -- Ignorance of Show Concurrency, Show Persistence and Show Class Properties

The following properties that are Show Concurrency, Show Persistence, and Show Class Properties of Object and Class Instance are ignored.

5.11.4. Objects that have the same name



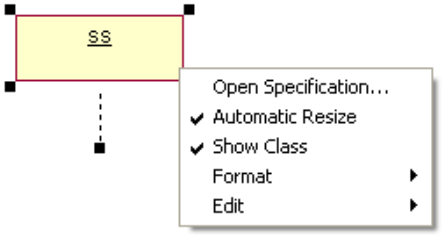
Rational Rose MagicDraw

Figure 60 -- Objects that have the same name

If object's name is the same, only one id will be granted. Therefore, after a conversion completes, only one element remains.

5.12. Sequence Diagram

5.12.1. Ignorance of Show Class Property



Rational Rose

Figure 61 -- Ignorance of Show Class Property

The Show Class property of Object in Sequence Diagram is ignored.

5.13. Sub Diagram Structure

The structure of sub diagram of class, use case, state, and activity element will be reorganized to new structure for the reason described below.

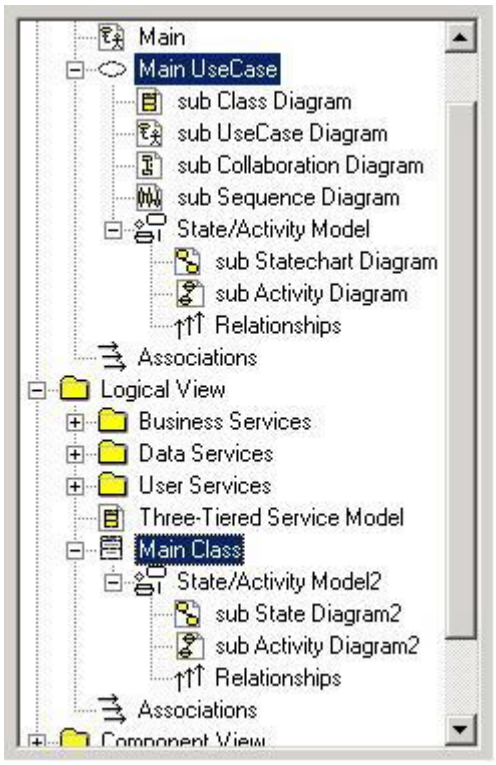


Figure 62 -- Structure of Sub Diagram in Rational Rose

Sub diagram in Rational Rose Model, UseCase can contain Class Diagram, UseCase Diagram, Collaboration Diagram, Sequence Diagram, Statechart Diagram, and Activity Diagram.

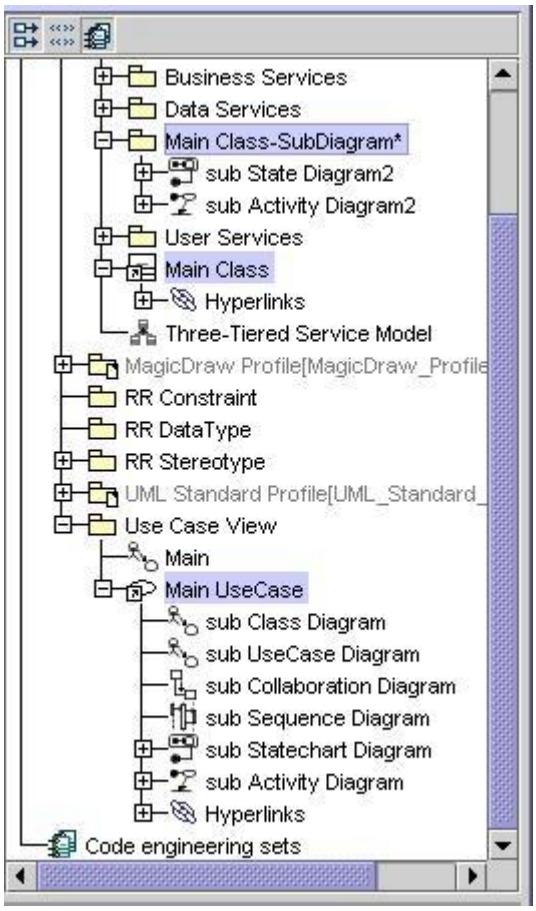


Figure 63 -- Structure of Sub Diagram converted for MagicDraw version 9.5 or lower

Due to the UML Standard Specification applied in MagicDraw version 9.5 of lower, UML 1.4, Class Element cannot contain any sub diagram.

The MagicDraw RConverter then generate additional package to keep those sub diagrams. MagicDraw RConverter will name the additional diagram after the Class name plus “-SubDiagram*”. Finally, MagicDraw RConverter generates hyperlink from Class Element to the first available sub Statechart/Activity Diagram.

For UseCase’s sub diagrams, MagicDraw RConverter can fully convert as the same structure as Rational Rose.

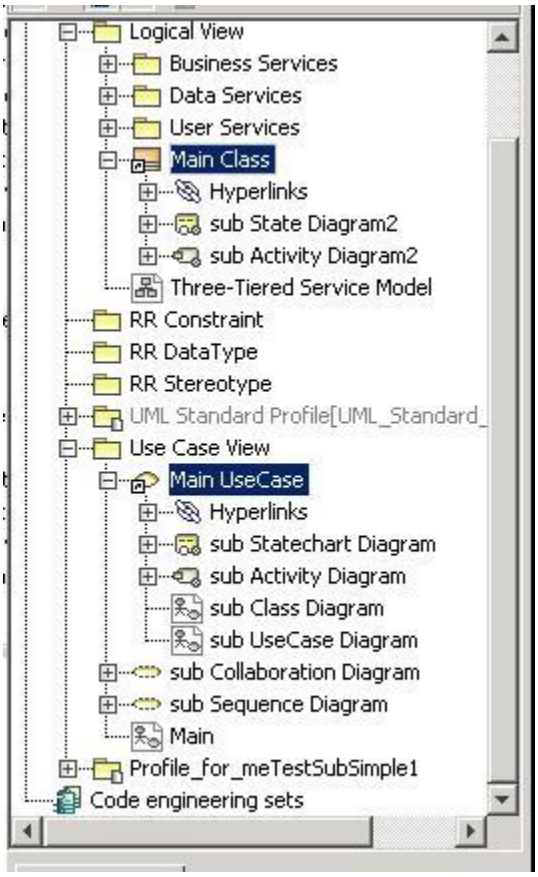


Figure 64 -- Structure of Sub Diagram converted for MagicDraw version 10.0-11.0

As a result of the evolution of UML Standard Specification, UML2.0 has been applied since MagicDraw version 10.0. Class Element's sub diagram can fully converted from Rational Rose.

But there's a constraint arise in UML2.0, Collaboration and Sequence Diagrams under UseCase Element will be move out to the same level of their parent UseCase Element.

5.14. Duplicated Elements

Duplicated element (copy and paste in diagram pane) will be eliminated because RR's API cannot generate a unique identification for each element on diagram pane (elements draw in diagram). The result would be as follow:

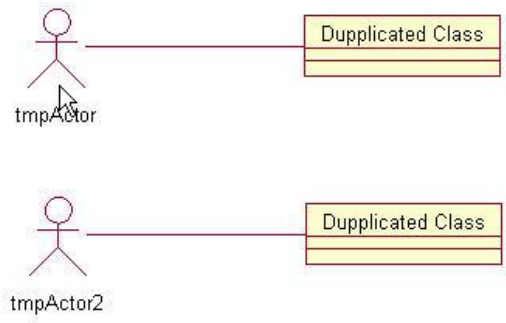


Figure 65 -- Creating Duplicated Element in Rational Rose

The above image is the RR model. There are duplicated Class named "Duplicated Class". After the conversion, the duplicated element will be eliminated. The following is the result.

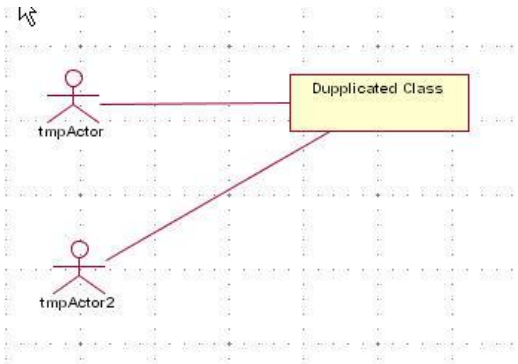
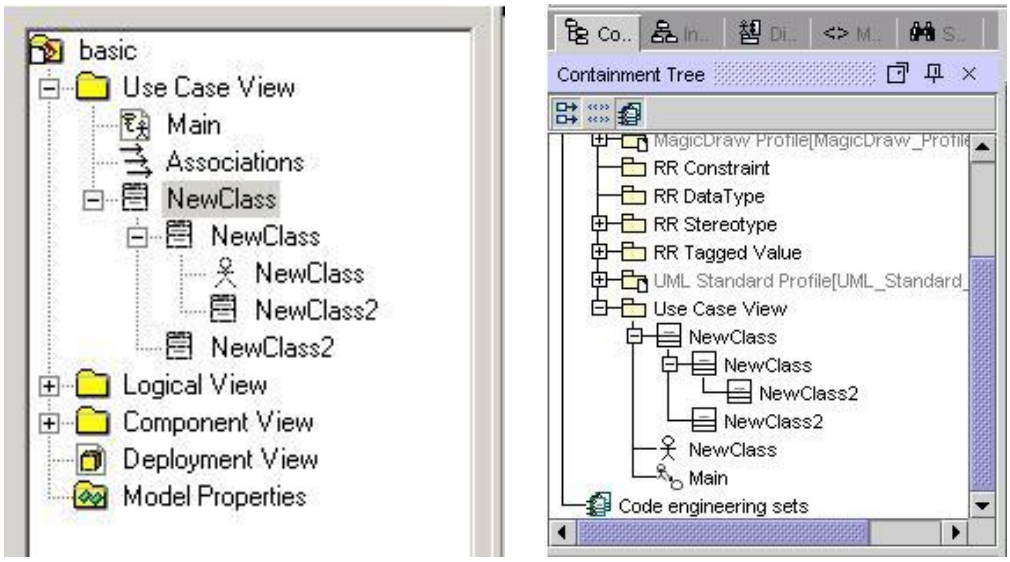


Figure 66 -- The result of conversion of duplicated element in MagicDraw

5.15. Nested Class as Actor Stereotype

In Rational Rose, actor element is a type of class that implements stereotype “Actor”. In nested class, actor can be included. In MagicDraw, actor cannot be nested class, it will move out to the same level of the parent class automatically as the result depicted below.



Rational Rose MagicDraw

Figure 67 -- Nested Class as Actor Stereotype

5.16. Conversion of the Unnamed Elements

Due to some information of unnamed package, use case, or component cannot be completely retrieved from Rational Rose Extensibility Interface, some elements might not be shown correctly.

This problem will occur only if the Rational Rose Model contains some packages, use cases, or components that do not have name on it. To avoid incorrect conversion result, user has to make sure that all packages, use cases, and components have some name.

5.17. Problem of (M) Element

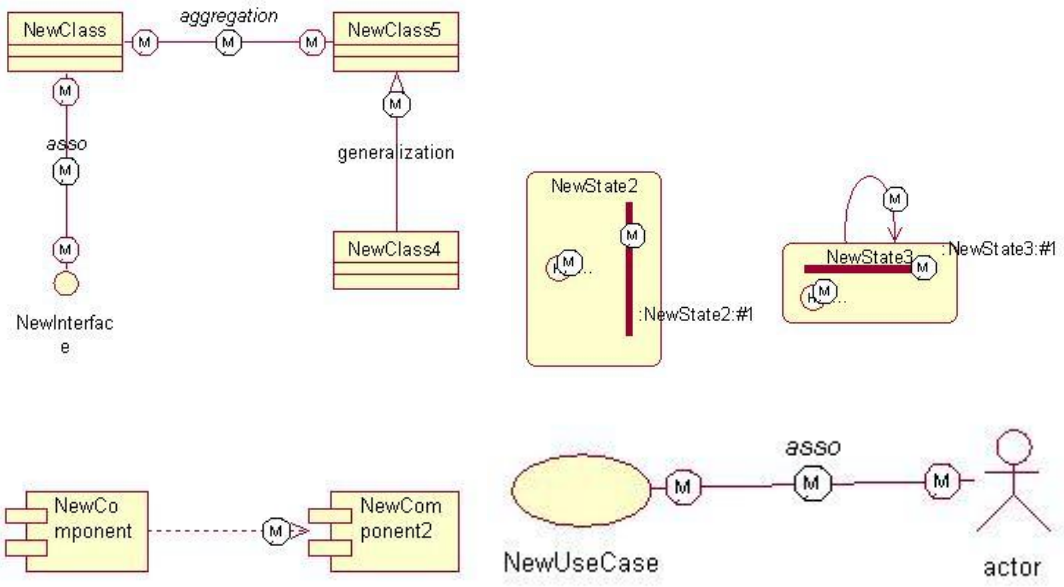


Figure 68 -- (M) Element

There are elements with (M) on it in some cases. This can occur when use copy elements in diagram and paste into another diagram in another project. These elements lost some specifications so the application will not generate this kind of (M) elements.

5.18. Stereotype Naming Limitation

There are several cases stereotype can be mapped from Rational Rose's to MagicDraw's. Such cases are as follow.

5.18.1. Magic Draw's predefined mapping

For this case of stereotype mapping, Rational Rose's stereotype is found matched, both name and its based class, to one previously defined by MagicDraw. As a result, when converted, stereotype name and based class will display as is.

5.18.2. Other type of mapping

This kind of mapping does not find an exact mapping of either its name or based class. Consequently, stereotype needs renamed using a colon sign to separate name from based class. For example, stereotype name "isolate" of based class "UseCase" was not found matched in any MagicDraw's predefined stereotype, the program changes its name to "isolate:UseCase". The problem will arise when locating colon sign in stereotype name.

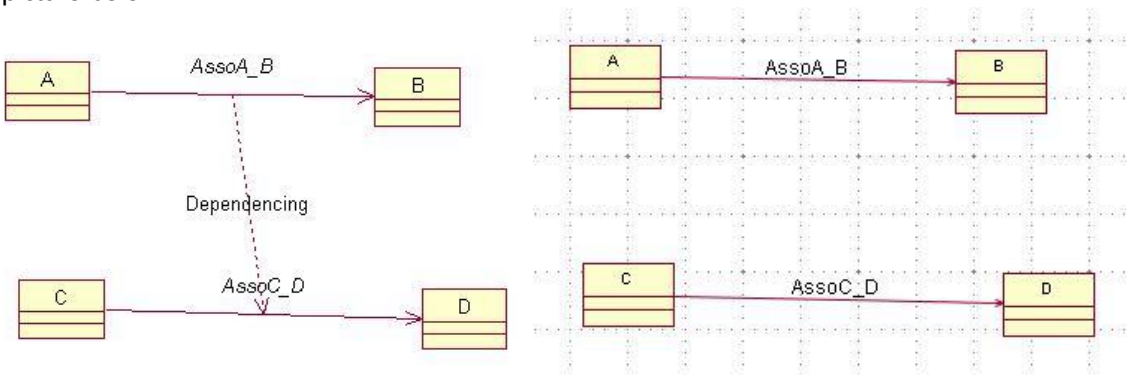
5.19. Stereotype naming in *.ini file

There are an exception where based class "Processor" and "Device" are entered in *.ini file. After conversion to MagicDraw is completed, the problem will come to attention when the stereotype with those based class displayed on an element does not show picture, which it should if any. The reason for that is Rational Rose has based class "Processor" and "Device" whereas MagicDraw only has based class "Node". As a result, stereotype name can be mapped correctly but the picture come with it cannot be found.

5.20. Relation between 2 Relations

There are and exception that MagicDraw RConverter cannot retrieve relation element that link between 2 relation elements. For example, there is an Association named "AssoA_B" that links between Class A and Class B. And there is an Association named "AssoC_D" that links between

Class C and Class D. If there's relation element such as Generalization named "GeneralLink" that link between AssoA_B and AssoC_D, "GeneralLink" element will be lost during the conversion process as the picture below.

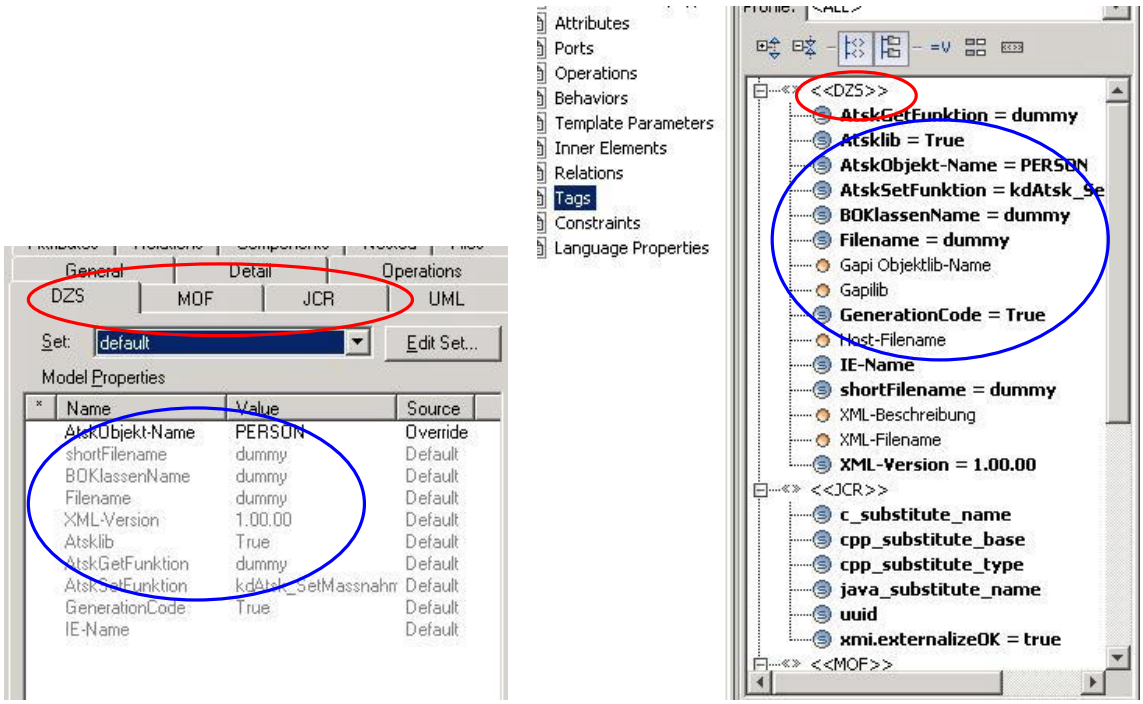


Rational Rose MagicDraw

Figure 69 -- Relation between 2 Ralations

5.21. Tool Name and Model Properties

Model Property is the extended information of code language for each element. Tool Name is the container of Model Properties for each code language. Tool Name will be mapped to Stereotype in MagicDraw and Model Properties in the Tool will be mapped to Tagged Value in the Stereotype as the picture below.



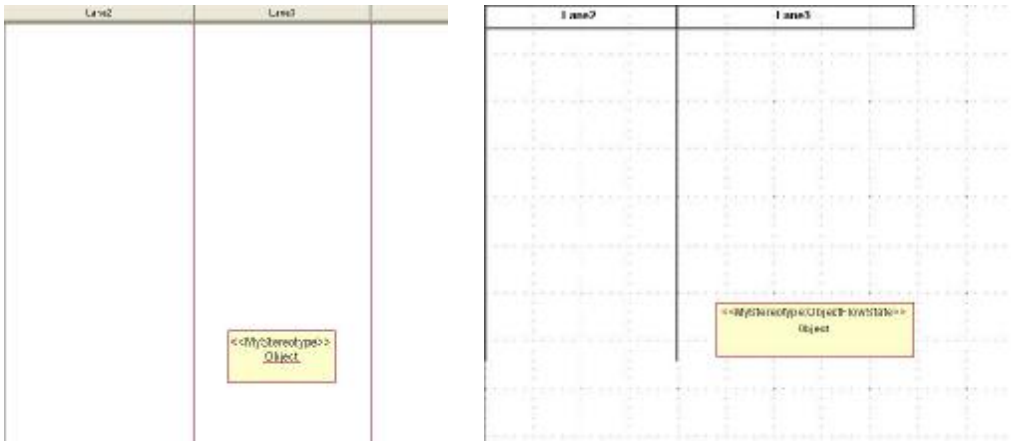
Rational Rose *MagicDraw*

Figure 70 – Tool Name and Model Properties

6. Trouble Shooting

6.1. Transparent Swimlane

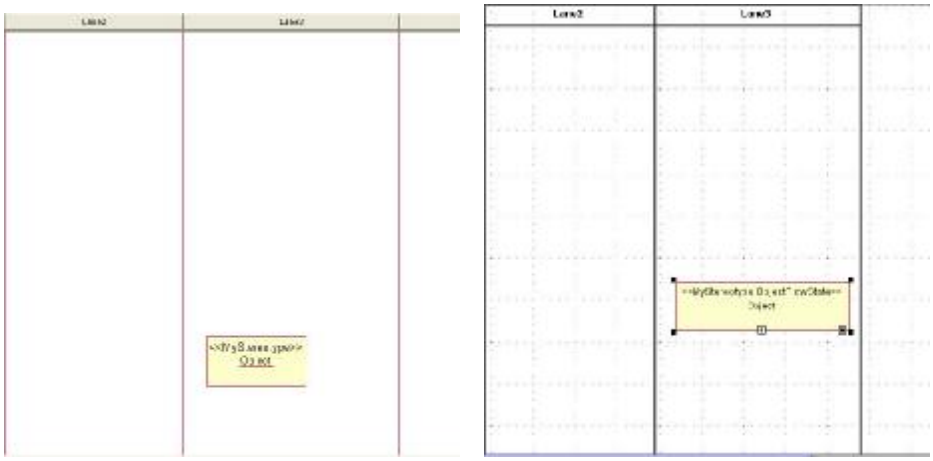
The line of Swimlane may be transparent if the item position is out of Swimlane boundary, this case may be occurred in several ways. For example, if the user converts Object with its stereotype in Rational Rose, after finish conversion, the stereotype will be added with base class as a suffix. So the width of Object is out of Swimlane boundary, then the line of Swimlane will be transparent but when you click the Swimlane it will be highlight.



Rational Rose MagicDraw

Figure 71 -- Transparent Swimlane

To solve this problem you have to expand width of Swimlane before make conversion as following



Rational Rose MagicDraw

Figure 72 -- Transparent Swimlane Solving

6.2. Unnamed item

Element in the unnamed package and sub element in unnamed use case might be lost in the conversion process. To solve this problem, please make sure that all elements have been named.

6.3. Warning Messages in MagicDraw

MagicDraw RConverter 1.1 process the conversion based on the XMI syntax of MagicDraw version 9.5 or lower that use UML1.4 Standard. Opening the converted file on MagicDraw 10.0-11.0, the conversion engine of MagicDraw would convert the UML model to UML2.0 Standard. As a result some warning message might posibly appear in the Message Windows of MagicDraw.

These are some example of warning messages such as:

- Warning on XXX Element (ID: 418231A100F53C398FE603D0). Wrong stereotype "YYY" base class.

- Warning on AssociationClass XXX (ID: _9_5_2610132_1146658190390_112417_97). Association from YYY (ID: _9_5_2610132_1146658172562_158479_1) to ZZZ (ID: _9_5_2610132_1146658174046_508901_17) lost.

6.4. Layout after conversion are different

There might be a chance that the layout of diagram would be misplacing compare to the original Rational Rose model. The cause might come from the raw data that saved in Rational Rose file could be misinterpreted by Rational Rose API that MagicDraw RConverter is connected with.

Or, what we have found, Rational Rose file might be drawn from the old version of Rational Rose.

If this problem occurs, we suggest to create new blank diagram in Rational Rose. Then copy all elements from the diagram that has this problem and paste into new blank diagram. Next is to delete the old diagram and rename the new diagram to be the same as the old one.

Finally, save the Rational Rose file and reconvert it using MagicDraw RConverter.

6.5. Some Model Properties are not converted

Make sure that all Tool Names for the Model Properties that user want to convert are listed in the Model Property option and the check box is checked.

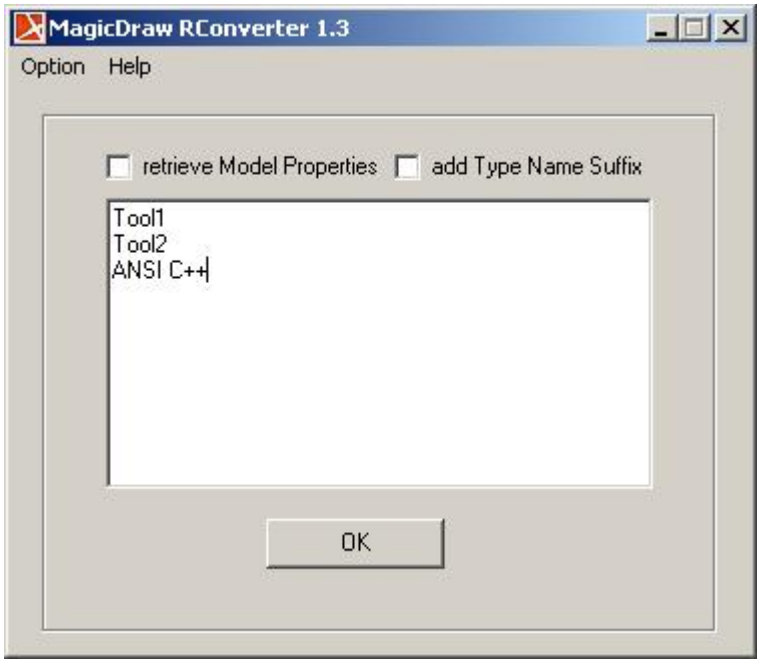


Figure 73 -- Model Property not converted

In some case, Rational Rose did not store exact the same tool name as show in the Rose Application. For example, tool name “ANSI C++” is stored in Rational Rose file (.mdl) as “Cplusplus”.

MagicDraw RConverter has the feature to map those unmatched tool names of Rose Model.

First you have to know what is the exact name that Rose store into their file instead of what is shown in the Application by observe through opening the Rose Model file (.mdl) in any text editor.

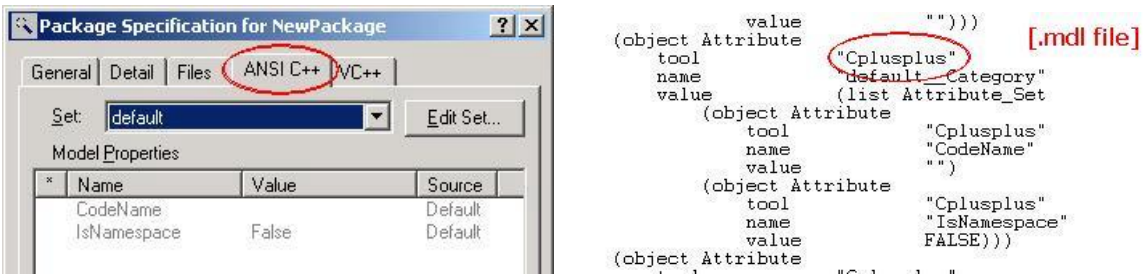


Figure 74 – Model Property in file

If the problem in the figure above occurs because of the unmatched tool names of the Rose Model, the user can add the mapping tool name into the configuration file of the RConverter Application folder. The file name is “toolmaps.txt”.

Type in the exact format for the mapping tool name, one mapping each line.

“TOOLNAME as shown in application” + “<=>” + “TOOLNAME as store in model file”

For example, ANSI C++<=>Cplusplus

6.6. Model Properties lost after save and load

RConverter convert Rose Model Properties to UML Stereotype and applies to model elements. In cases where Rose Model applies the same Model Properties to many Element Types, after conversion, MagicDraw will generate Stereotypes with the same name for each Metaclass. This causes stereotypes to be lost during saving and loading the project.

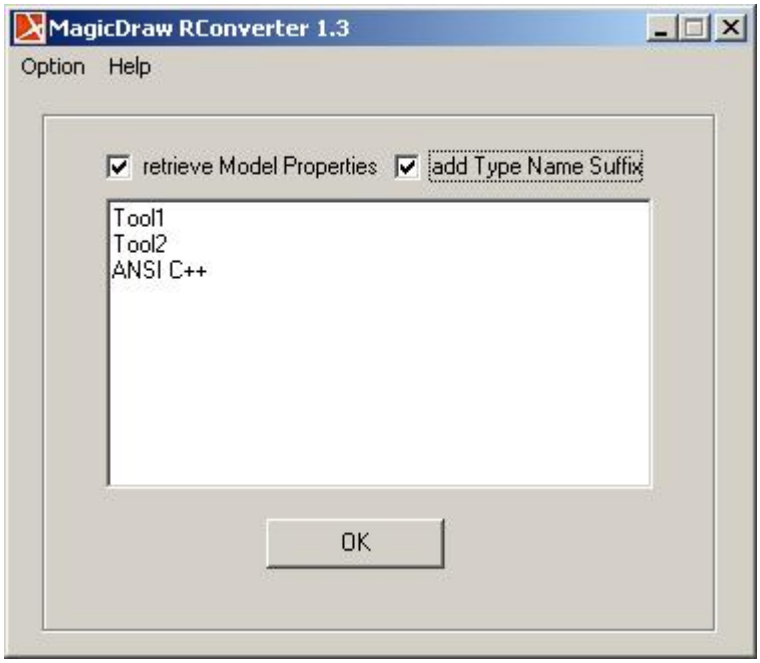


Figure 75 -- Add Suffix to Model Property

To avoid this, check “add Type Name Suffix” in Choose Model Property option. After the conversion, Stereotype Name will be appended with the Element Type. For example, <<Tool1>> stereotype will be duplicated with different Metaclass property to be applied for Class, Attribute, Operation, etc. After you checked “add Type Name Suffix”, Stereotype name will be <<Tool1_Class>>, <<Tool1_Attribute>>, <<Tool1_Operation>>, and so on. So, after saving and loading the project, the stereotypes will not be lost.

6.7. Error when starting RConverter in Windows Vista.

If you experience errors when starting RConverter, the issue may be resolved by granting administrator privileges.

- Right click on the MagicDraw RConverter icon.
- Click Properties, and then click the Compatibility tab.
- Under Privilege Level, select the Run this program as an administrator check box, and then click OK.

You must have administrator privileges to enable this feature. If you do not have administrator privileges, ask your system administrator for assistance.

Appendix A. List of Diagram Elements

Class Diagram

RR Element		Mapped MD	Remark
Class	**Specification**		
	Name	Name	
	Type	A Class with New Stereotype	
	Stereotype	Stereotype	
	Export Control	Visibility	
	– Public	– Public	
	– Protected	– Protected	
	– Private	– Private	
	– Implementation	– Package	
	Documentation	Documentation	
	Multiplicity	Multiplicity	RR: 1..n MD: 1..*
	Space	New Tagged Value	
	Persistence		
	– Persistent	– Defined Tagged Value	Persistence = True
	– Transient	– Defined Tagged Value	Persistence = False
	Concurrency		
	– Sequential	– New Tagged Value	
	– Guarded	– New Tagged Value	
	– Active	– New Tagged Value	
	– Synchronous	– New Tagged Value	
	Abstract	Abstract	
	Formal Argument (for Parameterized Class)	New Tagged Value	

RR Element		Mapped MD	Remark
	Operation	Operation	
	Attribute	Attribute	
	Relations (Generalization)		
	– Show inherited	– Ignore	
	– Name	– Name	
	– Parent	– Begins	
	– End Class	– Ends	
	Components		
	– Show all components	Ignore	
	– Component Name	Ignore	
	– Package Name	Ignore	
	– Language	Ignore	
	Nested	Inner Elements	
	– Name	– Class Name	
	Files	Hyperlink	
	– Filename	– File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	– Path	– Web Page	
	GOFPatterns	Ignore	
	– Abstract Factory	Ignore	
	– Adapter	Ignore	
	– Bridge	Ignore	
	– Chain of Responsibility	Ignore	
	– Command	Ignore	
	– Composite	Ignore	
	– Decorator	Ignore	

RR Element		Mapped MD	Remark
	– Fecade	Ignore	
	– Factory Method	Ignore	
	– Flyweight	Ignore	
	– Interator	Ignore	
	– Mediator	Ignore	
	– Observer	Ignore	
	– Prototype	Ignore	
	– Proxy	Ignore	
	– Singleton	Ignore	
	– State	Ignore	
	– Strategy	Ignore	
	– Template Method	Ignore	
	– Visitor	Ignore	
	Sub Diagrams		See the structure of sub diagram in the Constraint section.
	– Statechart Diagram	– State Diagram	
	– Activity Diagram	– Activity Diagram	
	Properties		
	Stereotype Display		
	– None	– Show Stereotype = False – Suppress Operation, Attribute = False – Show Full Classifier = True	

RR Element		Mapped MD	Remark
	– Label	– Show Stereotype = True – Suppress Operation, Attribute = False – Show Full Classifier = False	
	– Decoration	– Show Stereotype = False – Suppress Operation, Attribute = False – Show Full Classifier = False	
	– Icon	– Show Stereotype = False – Suppress Operation, Attribute = True – Show Full Classifier = False	
	Show Visibility	Show Attribute Visibility/Show Operation Visibility	
	Show All Attributes	N/A	
	Show All Operations	N/A	
	Show Operation Signature	Show Operations Signature	
	Show Compartment Stereotype	N/A	
	Select Compartment Items	N/A	

RR Element		Mapped MD	Remark
	Suppress Attributes	Ignore	Concern the suppression on Stereotype display property
	Suppress Operations	Ignore	Concern the suppression on Stereotype display property
	Font Size	Font (Size)	
	Font Name	Font	
	Font Color	Text Color	
	Font Style	Font (Style)	
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
Class : Attribute	**Specification**		
	Name	Name	
	Type	Type	
	Stereotype	Stereotype	
	Initial Value	Initial Value	
	Show Classes	Ignore	
	Export Control	Visibility	
	– Public	– Public	
	– Protected	– Protected	
	– Private	– Private	
	– Implementation	– Package	
	Documentation	Documentation	
	Containment		
	– By Value	New Tagged Value	
	– By Reference	New Tagged Value	
	– Unspecified	New Tagged Value	
	Static	New Tagged Value	

RR Element		Mapped MD	Remark
	Derived	Defined Tagged Value	
Class : Operation	**Specification**		
	Name	Name	
	Return Type	Return Type	
	Stereotype	Stereotype	
	Sub Diagrams		See structure of sub diagrams in Constraint Section.
	- Statechart Diagram	- State Diagram	
	- Activity Diagram	- Activity Diagram	
	Export Control	Visibility	
	– Public	– Public	
	– Protected	– Protected	
	– Private	– Private	
	– Implementation	– Package	
	Documentation	Documentation	
	Arguments	Parameter	
	– Name	Name	
	– Type	Type	
	– Default	Default Value	
	– Documentation	Documentation	
	Protocol	New Tagged Value	
	Qualification	New Tagged Value	
	Size	New Tagged Value	
	Time	New Tagged Value	
	Concurrency	Concurrency	
	– Sequential	– Sequential	
	– Guarded	– Guarded	
	– Synchronous	– Concurrent	

RR Element		Mapped MD	Remark
	Exception	Documentation of Operation	
	Preconditions	Documentation of Operation	
	Semantics	Documentation of Operation	
	Post conditions	Documentation of Operation	
	Files	Hyperlink	
	– Filename	File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	– Path	Web Page	
Association	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	– communicate	New Stereotype	
	– extend	New Stereotype	
	– include	New Stereotype	
	– realize	New Stereotype	
	– subscribe	New Stereotype	
	Role A	End A	
	Role B	End B	
	Documentation	Documentation	
	Derived	Defined Tagged Value	
	Link Element	Ignore	
	Name Direction	Ignore	
	Constraints	Constraints	
	Property		
	Stereotype Label	Show Stereotypes	
	Font Size	Font (Size)	

RR Element		Mapped MD	Remark
	Font	Font (Name)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Association : Role	**Specification**		
	Name	Name	
	Export Control	Visibility	
	– Public	– Public	
	– Protected	– Protected	
	– Private	– Private	
	– Implementation	– Package	
	Documentation	Documentation	
	Constraint	Constraint	
	Multiplicity	Multiplicity	RR: 1..n MD: 1..*
	Navigable	Navigable	
	Aggregate	Aggregation kind	MD: If Aggregate is selected, aggregation kind in MD is aggregate.The value is none otherwise.
	Static	Scope	MD: classifier
	Friend	New Tagged Value	
	Key/Qualifiers	Qualifiers	
	– Name	– Name	
	– Type	– Type	
	– Documentation	– Documentation	
	Containment of Class	New Tagged Value	
Generalization	**Specification**		
	Name	Name	

RR Element		Mapped MD	Remark
	Stereotype	Stereotype	
	Export Control		
	– Public	New Tagged Value	
	– Protected	New Tagged Value	
	– Private	New Tagged Value	
	– Implementation	New Tagged Value	
	Documentation	Documentation	
	Friendship Required	New Tagged Value	
	Virtual Inheritance	New Tagged Value	
	Property		
	Stereotype Label	Show Stereotypes	
	Font Size	Font (Size)	
	Font	Font (Name)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Dependency	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	Friendship Required	N/A	
	Export Control	N/A	
	– Public	New Tagged Value	
	– Protected	New Tagged Value	
	– Private	New Tagged Value	
	– Implementation	New Tagged Value	
	Multiplicity From	Ignore	
	Multiplicity To	Ignore	
	Documentation	Documentation	

RR Element		Mapped MD	Remark
	Property		
	Font Size	Font (Size)	
	Font	Font (Name)	
	Font Style	Font (Style)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	Oblique	
	– Oblique	Oblique	
Realize	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	Documentation	Documentation	
	Property		
	Stereotype Label	Show Stereotypes	
	Font Size	Font (Size)	
	Font	Font (Name)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Unidirection Association		Association with one side “navigable” property	
Association Class (map to Link Attribute in Class Diagram of MD)	**Specification**		
	Property		
	Font Size	Ignore	
	Font	Ignore	
	Line Color	Ignore	
	Line Style	Ignore	
	– Rectilinear	–	

RR Element		Mapped MD	Remark
	– Oblique	–	
Package	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	Documentation	Documentation	
	Global	New Tagged Value	
	Diagrams	Inner Element	
	– Class Diagram	– Class Diagram	
	– Use Case Diagram	– Use Case Diagram	
	– Collaboration Diagram	– Collaboration Diagram	
	– Sequence Diagram	– Sequence Diagram	
	– Activity Diagram	– Activity Diagram	
	– Statechart Diagram	– State Diagram	
	Files	Hyperlink	
	– Filename	– File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	– Path	– Web Page	
	ANSI C++	Ignore	
	VC ++	Ignore	
	Sub Diagrams	Assign State/Activity Diagram	(RR: Statechart/Activity Diagram)
	Property		
	Stereotype Display	Show Stereotypes	

RR Element		Mapped MD	Remark
	– None	– Show Stereotype = False – Suppress Operation, Attribute = False – Show Full Classifier = True	
	– Label	– Show Stereotype = True – Suppress Operation, Attribute = False – Show Full Classifier = False	
	– Decoration	– Show Stereotype = False – Suppress Operation, Attribute = False – Show Full Classifier = False	
	– Icon	– Show Stereotype = False – Suppress Operation, Attribute = True – Show Full Classifier = False	
	Font Size	Font (Size)	
	Font	Font (Name)	
	Line Color	Pen Color	
	Fill Color	Fill Color	

RR Element		Mapped MD	Remark
	Use Fill Color	Use Fill Color	
Actor	Same as a Class with stereotype		
Interface	Same as a Class with stereotype		
Parameterized Class	Same as a Class with stereotype		
Class Utility	Same as a Class with stereotype		
Parameterized Class Utility	Same as a Class with stereotype		
MetaClass	Same as a Class with stereotype		
Instantiated Class	Same as a Class with stereotype		
Instantiated Class Utility	Same as a Class with stereotype		
Generic Servlet	Same as a Class with stereotype		
Http Servlet	Same as a Class with stereotype		
Session EJB	Same as a Class with stereotype		
Entity EJB	Same as a Class with stereotype		
Message EJB	Same as a Class with stereotype		
Creates a Server Page	Same as a Class with stereotype		
Creates a Client Page	Same as a Class with stereotype		
Creates a Form	Same as a Class with stereotype		
DTDElementANY	Same as a Class with stereotype		
DTDElementEMPTY	Same as a Class with stereotype		

RR Element		Mapped MD	Remark
DTDElementPCDATA	Same as a Class with stereotype		
DTDElementContent	Same as a Class with stereotype		
DTDNotation	Same as a Class with stereotype		
DTDEntity	Same as a Class with stereotype		
DTDPi	Same as a Class with stereotype		
DTDChoiceGroup	Same as a Class with stereotype		
DTDSequenceGroup	Same as a Class with stereotype		
Control	Same as a Class with stereotype		
Boundary	Same as a Class with stereotype		
Entity	Same as a Class with stereotype		
Subsystem Package	Same as a Class with stereotype		
Domain	Same as a Class with stereotype		
Business Goal	Same as a Class with stereotype		
Business Worker	Same as a Class with stereotype		
Business Entity	Same as a Class with stereotype		
Business Event	Same as a Class with stereotype		
Aggregation	Association with “Aggregate” property		
Aggregation	Association with “Aggregate” property and one side of “Navigable” property		

RR Element		Mapped MD	Remark
Domain Package	Same as a Package with stereotype		
Business Use Case Model	Same as a Package with stereotype		
Business Analysis Model	Same as a Package with stereotype		
Business System	Same as a Package with stereotype		
Class Diagram	**Specification**		
	File	Hyperlinks: File	Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	
	Documentation	Documentation	

Use Case Diagram

RR Element		Mapped MD	Remark
Use Case	**Specification**		
	Name	Name	
	Documentation	Documentation	
	Stereotype	Stereotype	
	Abstract	Abstract	
	Sub Diagrams		
	– Collaboration Diagram	– Collaboration Diagram	See sub diagram structure in Constraint Section
	– Sequence Diagram	– Sequence Diagram	
	– Class Diagram	– Class Diagram	
	– Use Case Diagram	– Use Case Diagram	
	– Statechart Diagram	– Statechart Diagram	

RR Element		Mapped MD	Remark
	– Activity Diagram	– Activity Diagram	
	Relations (Association)	Relations (Association)	
	– Name	– Name	
	– Client	– Ends	
	– Supplier	– Begins	
	Relation (Generalization/ Dependency)	Relations (Generalization/ Dependency)	
	– Name	– Name	
	– Client	– Begins	
	– Supplier	– Ends	
	Rank	Tagged Values	
	Files	Hyperlink	
	– Filename	– File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	– Path	– Web Page	
	Properties		
	Font Color	Text Color	
	Fill Color	Fill Color	
	Line Color	Pen Color	
	Font Name	Font	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Stereotype Display		
	– None	– Show Stereotype = False – Suppress Content = False	Icon cannot be hidden.

RR Element		Mapped MD	Remark
	– Label	– Show Stereotype = True	Icon cannot be hidden.
	– Decoration	– Show Stereotype = False – Suppress Content = False	
	– Icon	– Show Stereotype = False – Suppress Extension Points = True	
Use Case Realization	Use Case Realization is stereotype in Use Case		
Business Use Case	Business Use Case is stereotype in Use Case		
Business use-case realization	Business use-case realization is stereotype in Use Case		
Class	**Specification**		
	Name	Name	
	Type	A Class with Stereotype	
	Stereotype	Stereotype	
	Export Control	Visibility	
	– Public	– Public	
	– Protected	– Protected	
	– Private	– Private	
	– Implementation	– Package	
	Documentation	Documentation	
	Multiplicity	Multiplicity	RR: 1..n MD: 1..*
	Space	New Tagged Value	
	Persistence		

RR Element		Mapped MD	Remark
	– Persistent	Defined Tagged Value	Persistence = True
	– Transient	Defined Tagged Value	Persistence = False
	Concurrency		
	– Sequential	New Tagged Value	
	– Guarded	New Tagged Value	
	– Active	New Tagged Value	
	– Synchronous	New Tagged Value	
	Abstract	Abstract	
	Formal Argument (for Parameterized Class)	New Tagged Value	
	Operation	Operation	
	Attribute	Attribute	
	Relations (Generalization)		
	– Show inherited	Ignore	
	– Name	Name	
	– Parent	Begins	
	– End Class	Ends	
	Components		
	– Show all components	Ignore	
	– Component Name	Ignore	
	– Package Name	Ignore	
	– Language	Ignore	
	Nested	Inner Elements	
	– Name	– Class Name	
	Files	Hyperlink	
	– Filename	– File	Two Tagged

RR Element		Mapped MD	Remark
	– Path	– Web Page	Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	GOFPatterns	Ignore	
	– Abstract Factory	Ignore	
	– Adapter	Ignore	
	– Bridge	Ignore	
	– Chain of Responsibility	Ignore	
	– Command	Ignore	
	– Composite	Ignore	
	– Decorator	Ignore	
	– Fecade	Ignore	
	– Factory Method	Ignore	
	– Flyweight	Ignore	
	– Interator	Ignore	
	– Mediator	Ignore	
	– Observer	Ignore	
	– Prototype	Ignore	
	– Proxy	Ignore	
	– Singleton	Ignore	
	– State	Ignore	
	– Strategy	Ignore	
	– Template Method	Ignore	
	– Visitor	Ignore	
	Sub Diagrams	Assign State/Activity Diagram	See sub diagram structure in Constraint Section
	Properties		

RR Element		Mapped MD	Remark
	Stereotype Display		
	– None	Class Property: Show Stereotype = False Suppress Operation, Attribute = False	
	– Label	Class Property: Show Stereotype = True Suppress Operation, Attribute = False	
	– Decoration	Class Property: Show Stereotype = False Suppress Operation, Attribute = False	
	– Icon	Class Property: Show Stereotype = False Suppress Operation, Attribute = True	
	Show Visibility	Show Attribute Visibility/Show Operation Visibility	
	Show All Attributes	N/A	
	Show All Operations	N/A	
	Show Operation Signature	Show Operations Signature	
	Show Compartment Stereotype	N/A	
	Select Compartment Items	N/A	
	Suppress Attributes	Ignore	Concern suppression on Stereotype Display property
	Suppress Operations	Ignore	Concern suppression on Stereotype Display property
	Font Size	Font (Size)	
	Font Name	Font	
	Font Color	Text Color	

RR Element		Mapped MD	Remark
	Font Style	Font (Style)	
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
Class : Attribute	**Specification**		
	Name	Name	
	Type	Type	
	Stereotype	Stereotype	
	Initial Value	Initial Value	
	Show Classes	N/A	Ignored
	Export Control	Visibility	
	– Public	– Public	
	– Protected	– Protected	
	– Private	– Private	
	– Implementation	– Package	
	Documentation	Documentation	
	Containment		
	– By Value	New Tagged Value	
	– By Reference	New Tagged Value	
	– Unspecified	New Tagged Value	
	Static	New Tagged Value	
	Derived	Defined Tagged Value	
Class : Operation	**Specification**		
	Name	Name	
	Return Type	Return Type	
	Stereotype	Stereotype	
	Export Control	Visibility	
	– Public	– Public	
	– Protected	– Protected	

RR Element		Mapped MD	Remark
	– Private	– Private	
	– Implementation	– Package	
	Documentation	Documentation	
	Arguments	Parameter	
	– Name	Name	
	– Type	Type	
	– Default	Default Value	
	– Documentation	Documentation	
	Protocol	New Tagged Value	
	Qualification	New Tagged Value	
	Size	New Tagged Value	
	Time	New Tagged Value	
	Concurrency	Concurrency	
	– Sequential	– Sequential	
	– Guarded	– Guarded	
	– Synchronous	– Concurrent	
	Exception	Documentation of Operation	
	Preconditions	Documentation of Operation	
	Semantics	Documentation of Operation	
	Post conditions	Documentation of Operation	
	Files	Hyperlink	
	– Filename	File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	– Path	Web Page	
Association	**Specification**		
	Name	Name	

RR Element		Mapped MD	Remark
	Stereotype	Stereotype	
	– communicate	New Stereotype	
	– extend	New Stereotype	Cannot convert to Extend Line in MD because it can't be used to connect between Class and UseCase as in RR
	– include	New Stereotype	Cannot convert to Include Line in MD because it can't be used to connect between Class and UseCase as in RR
	– realize	New Stereotype	Cannot convert to Realize Line in MD because it can't be used to connect between Class and UseCase as in RR
	– subscribe	New Stereotype	
	Role A	End A	
	Role B	End B	
	Documentation	Documentation	
	Derived	Defined Tagged Value	
	Link Element	Ignore	
	Name Direction	Ignore	
	Constraints	Constraints	
	Property		
	Stereotype Label	Show Stereotypes	
	Font Size	Font (Size)	
	Font	Font (Name)	
	Font (Style)	Font (Style)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	

RR Element		Mapped MD	Remark
	– Oblique	– Oblique	
Association : Role	**Specification**		
	Name	Name	
	Export Control	visibility	
	– Public	- Public	
	– Protected	- Protected	
	– Private	- Private	
	– Implementation	- Package	
	Documentation	Documentation	
	Constraint	Constraint	
	Multiplicity	Multiplicity	RR: 1..n MD: 1..*
	Navigable	Navigable	
	Aggregate	Aggregation kind	MD: If Aggregate is selected, aggregation kind in MD is aggregate. The value is none otherwise.
	Static	Scope	If Static is selected, Scope in MD is Static. Scope becomes Instant otherwise.
	Friend	New Tagged Value	
	Key/Qualifiers	Qualifiers	
	– Name	– Name	
	– Type	– Type	
	– Documentation	– Documentation	
	Containment of <Class>	New Tagged Value	
Generalization	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	Export Control	N/A	
	– Public	New Tagged Value	

RR Element		Mapped MD	Remark
	– Protected	New Tagged Value	
	– Private	New Tagged Value	
	– Implementation	New Tagged Value	
	Documentation	Documentation	
	Friendship Required	New Tagged Value	
	Virtual Inheritance	New Tagged Value	
	Property		
	Stereotype Label	Show Stereotypes	
	Font Size	Font (Size)	
	Font	Font (Name)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Dependency	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	Friendship Required	New Tagged Value	
	Export Control	N/A	
	Multiplicity From	Ignore	
	Multiplicity To	Ignore	
	Documentation	Documentation	
	Property		
	Stereotype Label	Show Stereotypes	
	Font Size	Font (Size)	
	Font	Font (Name)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Rectilinear	

RR Element		Mapped MD	Remark
	– Oblique	– Oblique	
Include	Include is stereotype in Dependency	Dependency with Stereotype	
Extend	Extend is stereotype in Dependency	Dependency with Stereotype	
Refine	Refine is stereotype in Dependency	Dependency with Stereotype	
Derive	Derive is stereotype in Dependency	Dependency with Stereotype	
Realize	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	Documentation	Documentation	
	Property		
	Stereotype Label	Show Stereotypes	
	Font Size	Font (Size)	
	Font	Font (Name)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Unidirection Association		Association with one side “navigable” property	
Association Class (map to Link Attribute in Class Diagram of MD)	**Specification**		
	Property		
	Font Size	Ignore	
	Font	Ignore	
	Line Color	Ignore	
	Line Style	Ignore	
	– Rectilinear	– Ignore	
	– Oblique	– Ignore	

RR Element		Mapped MD	Remark
Package	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	Documentation	Documentation	
	Global	New Tagged Value	
	Diagrams	Inner Element	
	– Class Diagram	– Class Diagram	
	– Use Case Diagram	– Use Case Diagram	
	– Collaboration Diagram	– Collaboration Diagram	
	– Sequence Diagram	– Sequence Diagram	
	– Activity Diagram	– Activity Diagram	
	– Statechart Diagram	– Statechart Diagram	
	Files	Hyperlink	
	– Filename	– File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	– Path	– Web Page	
	ANSI C++	N/A	Ignore
	VC ++	N/A	Ignore
	Property		
	Stereotype Display	Show Stereotypes	
	– None	Show Stereotype = False	Icon cannot be hidden.
	– Label	Show Stereotype = True	Icon cannot be hidden.

RR Element		Mapped MD	Remark
	– Decoration	Show Stereotype = False Suppress Content = False	
	– Icon	Show Stereotype = False Suppress Content = True	
	Font Size	Font (Size)	
	Font	Font (Name)	
	Font Style	Font (Style)	
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
Actor	Same as a Class with stereotype		
Interface	Same as a Class with stereotype		
Parameterized Class	Same as a Class with stereotype		
Class Utility	Same as a Class with stereotype		
Parameterized Class Utility	Same as a Class with stereotype		
MetaClass	Same as a Class with stereotype		
Instantiated Class	Same as a Class with stereotype		
Instantiated Class Utility	Same as a Class with stereotype		
Generic Servlet	Same as a Class with stereotype		
Http Servlet	Same as a Class with stereotype		
Session EJB	Same as a Class with stereotype		

RR Element		Mapped MD	Remark
Entity EJB	Same as a Class with stereotype		
Message EJB	Same as a Class with stereotype		
Creates a Server Page	Same as a Class with stereotype		
Creates a Client Page	Same as a Class with stereotype		
Creates a Form	Same as a Class with stereotype		
DTDElementANY	Same as a Class with stereotype		
DTDElementEMPTY	Same as a Class with stereotype		
DTDElementPCDATA	Same as a Class with stereotype		
DTDElementContent	Same as a Class with stereotype		
DTDNotation	Same as a Class with stereotype		
DTDEntity	Same as a Class with stereotype		
DTDPi	Same as a Class with stereotype		
DTDChoiceGroup	Same as a Class with stereotype		
DTDSequenceGroup	Same as a Class with stereotype		
Control	Same as a Class with stereotype		
Boundary	Same as a Class with stereotype		
Entity	Same as a Class with stereotype		
Subsystem Package	Same as a Class with stereotype		
Domain	Same as a Class with stereotype		

RR Element		Mapped MD	Remark
Business Goal	Same as a Class with stereotype		
Business Worker	Same as a Class with stereotype		
Business Entity	Same as a Class with stereotype		
Business Event	Same as a Class with stereotype		
Aggregation	Same as Association with “Aggregate” property		
Undirectional Aggregation	Save as Association with “Aggregate” property and one side of “Navigable” property		
Domain Package	Same as a Package with stereotype		
Business Use Case Model	Same as a Package with stereotype		
Business Analysis Model	Same as a Package with stereotype		
Business System	Same as a Package with stereotype		
Use Case Diagram	**Specification**		
	File	Hyperlinks: File	Two Tagged Definition are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	
	Documentation	Documentation	

Activity Diagram

RR Element		Mapped MD	Remark
Start State	**Specification**		
	Name	Name	MD: Pseudo State with Pseudo kind = initial
	Documentation	Documentation	

RR Element		Mapped MD	Remark
Action			
• Type (When in Action Spec)	– On Entry – On Exit – Do – On Event	- Tagged Values (Custom) - Tagged Values (Custom) - Tagged Values (Custom) - Tagged Values (Custom)	
– Action Expression (Name in Action Specification)		Tagged Values (Custom)	
Transition		Relations	
– Event		Name	
– End		Ends	
Swimlanes		N/A	See Swimlane
– Name		N/A	
Properties			
Font Color		Text Color	
Line Color		Pen Color	
Font Name		Font (Name)	
Font Size		Font (Size)	
Font Style		Font (Style)	
Stereotype Display			
– None		Ignore	
– Label		Ignore	
– Decoration		Ignore	
– Icon		Ignore	
Show Actions		Ignore	
Show Nested Elements		Ignore	

RR Element			Mapped MD	Remark
	File		Hyperlinks: File	Two Tagged Definition are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL		Hyperlinks: Web Page	
End State	**Specification**			
	Name		Name	MD: Final State
	Documentation		Documentation	
	Action			
	• Type (When in Action Spec)	– On Entry – On Exit – Do – On Event	– Tagged Values (Custom) – Tagged Values (Custom) – Tagged Values (Custom) – Tagged Values (Custom)	
	• Action Expression (Name in Action Specification)		Tagged Values (Custom)	
	Transition		Relations	
	– Event		– Name	
	– End		– Ends	
	Swimlanes		N/A	See in Swimlane
	– Name		– N/A	
	Properties			
	Line Color		Pen Color	
	Font Name		Font (Name)	
	Font Size		Font (Size)	
	Font Style		Font (Style)	
	Stereotype Display			
	– None		Ignore	
	– Label		Ignore	

RR Element			Mapped MD	Remark
	– Decoration		Ignore	
	– Icon		Ignore	
	Show Actions		Ignore	
	Show Nested Elements		Ignore	
State	**Specification**			
	Name		Name	MD: Composite State
	Stereotype		Stereotype	
	Documentation		Documentation	
	• Type (When in Action Spec)	– On Entry – On Exit – Do – On Event	- Tagged Values (Custom) - Tagged Values (Custom) - Tagged Values (Custom) - Tagged Values (Custom)	
	Action Expression (Name in Action Specification)		Tagged Values (Custom)	
	Transition		Relations	
	– Event		– Name	
	– End		– Ends	
	Swimlanes		N/A	See Swimlane
	– Name		– N/A	
	State/Activity history		Shallow History State	
	Sub State/Activity history		Deep History State	
	Sub Diagrams		Assign State/Activity Diagram	
	Properties			
	Font Color		Text Color	
	Fill Color		Fill Color	
	Line Color		Pen Color	
	Font Name		Font (Name)	

RR Element			Mapped MD	Remark
	Font Size		Font (Size)	
	Font Style		Font (Style)	
	Use Fill Color		Use Fill Color	
	Stereotype Display			
	– None		Show Stereotype = False	
	– Label		Show Stereotype = True	
	– Decoration		Show Stereotype = True	
	– Icon		Show Stereotype = True	
	Show Actions		Ignore	
	Show Nested Element (True)		Ignore	
	Show Nested Element (False)		Ignore	
	File		Hyperlinks: File	Two Tagged Definition are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL		Hyperlinks: Web Page	
Activity	**<u>Specification</u>**			
	Name		Name	MD:Action State
	Stereotype		Stereotype	
	Documentation		Documentation	
	• Type (When in Action Spec)	– On Entry – On Exit – Do – On Event	- Tagged Values (Custom) - Tagged Values (Custom) - Tagged Values (Custom) - Tagged Values (Custom)	

RR Element		Mapped MD	Remark
	Action Expression (Name in Action Specification)	Tagged Values (Custom)	
	Transition	Relations	
	– Event	– Name	
	– End	– Ends	
	Swimlanes	N/A	See Swimlane
	– Name	– N/A	
	State/Activity history	Shadow History State	
	Sub State/Activity history	Deep History State	
	Sub Diagram	Assign State/Activity Diagram	
	Properties		
	Font Color	Text Color	
	Fill Color	Fill Color	
	Line Color	Pen Color	
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Stereotype Display		
	– None	Show Stereotype = False	
	– Label	Show Stereotype = True	
	– Decoration	Show Stereotype = True	
	– Icon	Show Stereotype = True	
	Show Action	Ignore	
	Show Visibility	Ignore	
	Show Nested Element (True)	Ignore	

RR Element		Mapped MD	Remark
	Show Nested Element (False)	Ignore	
State Transition	**Specification**		
	Event	Name	MD: Transition
	Argument	Parameter (Trigger)	
	Stereotype	Stereotype	
	Documentation	Documentation	
	Guard Condition	Guard Condition	
	Action	Tagged Values (Custom)	
	Send Event	Name (Effect)	MD's Type is uninterpreted.
	Send Arguments	Arguments (Effect)	
	Send Target	Target (Effect)	
	Transition between sub states		
	– From	– Source	
	– To	– Target	
	Properties		
	Font Color	Text Color	
	Fill Color	Fill Color	
	Line Color	Pen Color	
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Stereotype Label	Show Stereotypes	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Transition to self	**Specification**		
	Event	Name	
	Argument	Parameter (Trigger)	

RR Element		Mapped MD	Remark
	Stereotype	Stereotype	
	Documentation	Documentation	
	Guard Condition	Guard Condition	
	Action	Tagged Values (Custom)	
	Send Event	Name (Effect)	
	Send Arguments	Arguments (Effect)	
	Send Target	Target (Effect)	
	Transition between sub states		
	– From	– Source	
	– To	– Target	
	Properties		
	Font Color	Text Color	
	Fill Color	Fill Color	
	Line Color	Pen Color	
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Stereotype Label	Show Stereotypes	
	Position (Top, Bottom, Left, Right)	Can't be mapped but it is able to code to generate position	
	Line Style (Style doesn't effect)	N/A	
Horizontal Synchronization	**Specification**		
	Name	Name	MD: Horizontal Synchronization Bar (Pseudo State)/ Orientation = Horizontal
	Documentation	Documentation	
	Stereotype	Stereotype	
	Transitions	Relations	

RR Element		Mapped MD	Remark
	– Event	– Name	
	– End	– Ends	
	Properties		
	Font Color	Text Color	
	Line Color	Pen Color	
	Font Name	Ignore	
	Font Size	Ignore	
	Font Style	Ignore	
	Stereotype Display		
	– None	Ignore	
	– Label	Ignore	
	– Decoration	Ignore	
	– Icon	Ignore	
Vertical Synchronization	**Specification**		
	Name	Name	MD: Horizontal Synchronization Bar (Pseudo State)/ Orientation = Vertical
	Documentation	Documentation	
	Stereotype	Stereotype	
	Transitions	Relations	
	– Event	– Name	
	– End	– Ends	
	Properties		
	Font Color	Text Color	
	Line Color	Pen Color	
	Font Name	Ignore	
	Font Size	Ignore	
	Font Style	Ignore	
	Stereotype Display		

RR Element		Mapped MD	Remark
	– None	Ignore	
	– Label	Ignore	
	– Decoration	Ignore	
	– Icon	Ignore	
Decision	**Specification**		
	Name	Name	MD: Decision Point
	Documentation	Documentation	
	Stereotype	Stereotype	
	Transitions	Relations	
	– Event	– Name	
	– End	– Ends	
	Swim Lane	N/A	See Swimlane
	– Name	– N/A	
	Properties		
	Font Color	Ignore	
	Fill Color	Fill Color	
	Line Color	Pen Color	
	Font Name	Ignore	
	Font Size	Ignore	
	Font Style	Ignore	
	Use Fill Color	Use Fill Color	
	Stereotype Display		
	– None	Ignore	
	– Label	Ignore	
	– Decoration	Ignore	
	– Icon	Ignore	
Swim Lane	**Specification**		
	Name	Name	
	Documentation	Documentation	

RR Element		Mapped MD	Remark
	Class	N/A	
	Properties		
	Fill Color	Ignore	
	Line Color	Ignore	Use MD's default value
	Use Fill Color	Ignore	
Object	**Specification**		
	Name	Name	MD: Object Flow State
	Documentation	Documentation	
	Stereotype	Stereotype	
	Class	Type	Cannot derive value from REI
	State	Ignore	
	Persistence	Tagged Values	
	– Persistent	– Tagged Values	
	– Static	– Tagged Values	
	– Transient	– Tagged Values	
	Multiple instances	Tagged Values	
	Incoming Object Flows	Relation	
	– Name	– Ends	
	Outgoing Object Flows	Relation	
	– Name	– Begins	
	Properties		
	Font Color	Text Color	
	Fill Color	Fill Color	
	Line Color	Pen Color	
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Use Fill Color	Use Fill Color	
	Show Concurrency	Ignore	

RR Element		Mapped MD	Remark
	Show Persistence	Ignore	
	Show Class	Ignore	- Cannot derive value from REI - Show Class = True
Object Flow	**Specification**		
	Name	Name	MD: Transition
	Class	N/A	
	Documentation	Documentation	
	Stereotype	Stereotype	
	Properties		
	Font Color	Text Color	
	Line Color	Pen Color	
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Stereotype Label	Show Stereotypes	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Activity Diagram	**Specification**		
	File	Hyperlinks: File	Two Tagged Definition are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	
	Documentation	Documentation	

Sequence Diagram

RR Element		Mapped MD	Remark
Object	**Specification**		
	Name	Name	MD: Classifier Role

RR Element		Mapped MD	Remark
	Class	Base classifier	
	Persistence	Tagged Values	
	– Persistent	– Defined Tagged Values	Persistent = true
	– Static	– New Tagged Values	
	– Transient	– Defined Tagged Values	Persistent = false
	Multiple instances	Multiplicity (*)	
	Documentation	Documentation	
	Properties		
	Show Class	Ignore	
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Font Color	Text Color	
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
	Stereotype Display	N/A	These properties do not effect object.
	– None	N/A	
	– Label	N/A	
	– Decoration	N/A	
	– Icon	N/A	
Object Message	**Specification**		
	Name	Name	MD: Message (If name is operation's name of receiver, message's type is "Call". The message's type is "uninterpreted" otherwise.)
	Synchronization		

RR Element		Mapped MD	Remark
	– Simple	Message with uninterpreted Action	
	– Synchronous	Synchronous	If name is operation's name of receiver, message's type is "Call". The message type is "uninterpreted" otherwise.
	– Balking	Message with defined stereotype	
	– Timeout	Message with defined stereotype	
	– Procedure Call	Message with new stereotype	
	– Asynchronous	Asynchronous	If name is operation's name of receiver, message's type is "Call". The message type is "uninterpreted" otherwise.
	– Return	Message with Return Action	If name is operation name of receiver and "Return" is selected, message type is "return".
	Frequency		
	– Aperiodic	– New Tagged Value	
	– Periodic	– New Tagged Value	
	Documentation	Documentation	
	Properties		
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Font Color	Text Color	
	Line Color	Pen Color	

RR Element		Mapped MD	Remark
	Fill Color	Ignore	Filled color is applied in different place. RR: Apply at life time bar. MD: Apply at message line.
	Use Fill Color	Ignore	
Message to Self	**Specification**		
	Name	Name	If name is operation's name of receiver, message's type is "Call". The message's type is "uninterpreted" otherwise.
	Synchronization		
	– Simple	Message with uninterpreted Action	
	– Synchronous	Synchronous	If name is operation's name of receiver, message's type is "Call". The message's type is "uninterpreted" otherwise.
	– Balking	Message with defined stereotype	
	– Timeout	Message with defined stereotype	
	– Procedure Call	Message with new stereotype	
	– Asynchronous	Asynchronous	If name is operation's name of receiver, message's type is "Call". The message's type is "uninterpreted" otherwise.
	– Return	Message with Return Action	If name is operation name of receiver and "Return" is selected, message type is "return".
	Frequency		

RR Element		Mapped MD	Remark
	– Aperiodic	– New Tagged Value	
	– Periodic	– New Tagged Value	
	Documentation	Documentation	
	Properties		
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Font Color	Text Color	
	Line Color	Pen Color	
	Fill Color	Ignore	RR: Use Filled Color does not effect any changes. MD: Apply at message line.
	Use Fill Color	Ignore	
Destruction Marker	**Properties**		
		Message with "destroy" action type.	Specification: Default Value of MD
	N/A	Name = blank	
Sequence Diagram	**Specification**		
	File	Hyperlinks: File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	
	Documentation	Documentation	

Collaboration Diagram

RR Element		Mapped MD	Remark
Object	**Specification**		
	Name	Name	MD: Classifier Role

RR Element		Mapped MD	Remark
	Class	Base classifier	
	Persistence	Tagged Values	
	– Persistent	– Defined Tagged Values	Persistent = true
	– Static	– New Tagged Values	
	– Transient	– Defined Tagged Values	Persistent = false
	Multiple instances	Multiplicity (*)	
	Documentation	Documentation	
	Properties		
	Show Concurrency	Ignore	
	Show Persistence	Ignore	
	Show Class	Ignore	
	Font Color	Text Color	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Font Name	Font (Name)	
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
Class Instance	**Specification**		
	Name	Name	MD Classifier Role
	Class	Base classifier	
	Documentation	Documentation	
	Properties		
	Show Concurrency	Ignore	This command in RR does not effect class instance.
	Font Color	Text Color	
	Font Size	Font (Size)	
	Font Style	Font (Style)	

RR Element		Mapped MD	Remark
	Font Name	Font (Name)	
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
Object Link	**Specification**		
	Name	Name	MD Association Role
	Assoc	text	
	Supplier Visibility		MD Association End Role
	– Unspecified	– New Stereotype	
	– Field	– New Stereotype	
	– Parameters	– New Stereotype	
	– Local	– New Stereotype	
	– Global	– New Stereotype	
	– Shared	– New Stereotype	
	Client Visibility		MD Association End Role
	– Unspecified	– New Stereotype	
	– Field	– New Stereotype	
	– Parameters	– New Stereotype	
	– Local	– New Stereotype	
	– Global	– New Stereotype	
	– Shared	– New Stereotype	
	Message	Message	

RR Element		Mapped MD	Remark
	– Sequence	– Numbering	
	– Message Name	– Name	
	– Receiver Object	– Receiver	
	Properties		
	Font Size	Font (Size)	
	Font Color	Text Color	
	Font Style	Font (Style)	
	Font Name	Font (Name)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Link to Self	**Specification**		
	Name	Name	MD: Association Role
	Visibility		MD Association End Role
	– Unspecified	– New Stereotype	
	– Field	– New Stereotype	
	– Parameters	– New Stereotype	
	– Local	– New Stereotype	
	– Global	– New Stereotype	
	– Shared	– New Stereotype	
	Message	Message	
	– Sequence	– Numbering	
	– Message Name	– Name	
	– Receiver Object	– Receiver	

RR Element		Mapped MD	Remark
	Properties		
	Font Size	Font (Size)	
	Font Color	Text Color	
	Font Style	Font (Style)	
	Font Name	Font (Name)	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Link Message and Reverse Link Message	**Specification**		
	Name	Name	MD: Message (If Name is operation's name of receiver, message's type is "Call". The message is "uninterpreted" otherwise.)
	Documentation	Documentation	
	Synchronization		
	– Simple	Message with uninterpreted Action	
	– Synchronous	Synchronous	If Name is operation's name of receiver, message's type is "Call". The message is "uninterpreted" otherwise.
	– Balking	Message with defined stereotype	
	– Timeout	Message with defined stereotype	
	– Procedure Call	Message with new stereotype	

RR Element		Mapped MD	Remark
	– Asynchronous	Asynchronous	If Name is operation's name of receiver, message's type is "Call". The message is "uninterpreted" otherwise.
	– Return	Message with Return Action	If Name is operation name of receiver and "Return" is selected, message type is "return".
	Frequency		
	– Aperiodic	– New Tagged Value	
	– Periodic	– New Tagged Value	
	Data Token/Reverse Data Token	Ignore	
Collaboration Diagram	**Specification**		
	File	Hyperlinks: File	Two Tagged Definition are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	
	Documentation	Documentation	

StateChart Diagram

RR Element		Mapped MD	Remark
Start State	**Specification**		
	Name	Name	MD: Pseudo State with Pseudo kind = initial
	Documentation	Documentation	
	Action		

RR Element		Mapped MD	Remark
	• Type (When in Action Spec) – On Entry – On Exit – Do – On Event	– Tagged Values (Custom) – Tagged Values (Custom) – Tagged Values (Custom) – Tagged Values (Custom)	
	– Action Expression (Name in Action Specification)	Tagged Values (Custom)	
	Transition	Relations	
	– Event	– Name	
	– End	– Ends	
	Swimlanes	N/A	See Swimlane
	– Name	– N/A	
	Properties		
	Font Color	Text Color	
	Line Color	Pen Color	
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Stereotype Display		
	– None	Ignore	
	– Label	Ignore	
	– Decoration	Ignore	
	– Icon	Ignore	
	Show Actions	Ignore	
	Show Nested Elements	Ignore	

RR Element			Mapped MD	Remark
	File		Hyperlinks: File	Two Tagged Definition are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL		Hyperlinks: Web Page	
End State	**Specification**			
	Name		Name	MD: Final State
	Documentation		Documentation	
	Action			
	• Type (When in Action Spec)	– On Entry – On Exit – Do – On Event	– Tagged Values (Custom) – Tagged Values (Custom) – Tagged Values (Custom) – Tagged Values (Custom)	
	• Action Expression (Name in Action Specification)		Tagged Values (Custom)	
	Transition		Relations	
	– Event		– Name	
	– End		– Ends	
	Swimlanes		N/A	See Swimlane
	– Name		– N/A	
	Properties			
	Line Color		Pen Color	
	Font Name		Ignore	
	Font Size		Ignore	
	Font Style		Ignore	
	Stereotype Display			
	– None		Ignore	
	– Label		Ignore	

RR Element			Mapped MD	Remark
	– Decoration		Ignore	
	– Icon		Ignore	
	Show Actions		Ignore	
	Show Nested Elements		Ignore	
State	**Specification**			
	Name		Name	MD: Composite State
	Stereotype		Stereotype	
	Documentation		Documentation	
	Action			
	• Type (When in Action Spec)	– On Entry – On Exit – Do – On Event	– Tagged Values (Custom) – Tagged Values (Custom) – Tagged Values (Custom) – Tagged Values (Custom)	
	Action Expression (Name in Action Specification)		Tagged Values (Custom)	
	Transition		Relations	
	– Event		– Name	
	– End		– Ends	
	Swimlanes		N/A	See Swimlane
	– Name		– N/A	
	State/Activity history		Shallow History State	
	Sub State/Activity history		Deep History State	
	Sub Diagrams		Assign State/Activity Diagram	
	Properties			
	Font Color		Text Color	
	Fill Color		Fill Color	
	Line Color		Pen Color	

RR Element		Mapped MD	Remark
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Use Fill Color	Use Fill Color	
	Stereotype Display		
	– None	Show Stereotype = False	
	– Label	Show Stereotype = True	
	– Decoration	Show Stereotype = True	
	– Icon	Show Stereotype = True	
	Show Actions	Ignore	
	Show Nested Element (True)	Ignore	
	Show Nested Element (False)	Ignore	
State Transition	**Specification**		
	Event	Name	MD:Transition
	Argument	Parameter (Trigger)	
	Stereotype	Stereotype	
	Documentation	Documentation	
	Guard Condition	Guard Condition	
	Action	Tagged Values (Custom)	
	Send Event	Name (Effect)	MD's Type is uninterpreted.
	Send Arguments	Arguments (Effect)	
	Send Target	Target (Effect)	
	Transition between sub states		
	– From	– Source	
	– To	– Target	

RR Element		Mapped MD	Remark
	Properties		
	Font Color	Text Color	
	Fill Color	Fill Color	
	Line Color	Pen Color	
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Stereotype Label	Show Stereotypes	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Transition to self	**Specification**		
	Event	Name	
	Argument	Parameter (Trigger)	
	Stereotype	Stereotype	
	Documentation	Documentation	
	Guard Condition	Guard Condition	
	Action	Tagged Values (Custom)	
	Send Event	Name (Effect)	
	Send Arguments	Arguments (Effect)	
	Send Target	Target (Effect)	
	Transition between sub states		
	– From	– Source	
	– To	– Target	
	Properties		
	Font Color	Text Color	
	Fill Color	Fill Color	
	Line Color	Pen Color	

RR Element		Mapped MD	Remark
	Font Name	Font (Name)	
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Stereotype Label	Show Stereotypes	
	Position (Top, Bottom, Left, Right)	Can't be mapped but it is able to code to generate position	
	Line Style (Style doesn't effect)	N/A	
Horizontal Synchronization	**Specification**		
	Name	Name	MD: Horizontal Synchronization Bar (Pseudo State)/ Orientation = Horizontal
	Documentation	Documentation	
	Stereotype	Stereotype	
	Transitions	Relations	
	– Event	– Name	
	– End	– Ends	
	Properties		
	Font Color	Text Color	
	Line Color	Pen Color	
	Font Name	Ignore	
	Font Size	Ignore	
	Font Style	Ignore	
	Stereotype Display		
	– None	Ignore	
	– Label	Ignore	
	– Decoration	Ignore	
	– Icon	Ignore	
Vertical	**Specification**		

RR Element		Mapped MD	Remark
Synchronization	Name	Name	MD: Horizontal Synchronization Bar (Pseudo State)/ Orientation = Vertical
	Documentation	Documentation	
	Stereotype	Stereotype	
	Transition	Relations	
	– Event	– Name	
	– End	– Ends	
	Properties		
	Font Color	Text Color	
	Line Color	Pen Color	
	Font Name	Ignore	
	Font Size	Ignore	
	Font Style	Ignore	
	Stereotype Display		
	– None	Ignore	
	– Label	Ignore	
	– Decoration	Ignore	
	– Icon	Ignore	
Decision	**Specification**		
	Name	Name	MD: Decision Point
	Documentation	Documentation	
	Stereotype	Stereotype	
	Transitions	Relations	
	– Event	– Name	
	– End	– Ends	
	Swim Lane		See Swimlane
	– Name	– N/A	
	Properties		

RR Element		Mapped MD	Remark
	Fill Color	Fill Color	
	Line Color	Pen Color	
	Font Name	Ignore	
	Font Size	Ignore	
	Font Style	Ignore	
	Use Fill Color	Use Fill Color	
	Stereotype Display		
	– None	Ignore	
	– Label	Ignore	
	– Decoration	Ignore	
	– Icon	Ignore	
State Diagram	**Specification**		
	File	Hyperlinks: File	Two Tagged Definition are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	
	Documentation	Documentation	

Component Diagram

RR Element		Mapped MD	Remark
Component	**Specification**		
	Name	Name	
	Stereotype	New Stereotype	
	– Active X	New Stereotype	
	– Applet	New Stereotype	
	– Application	New Stereotype	Predefined
	– Database	New Stereotype	New Stereotype, namely RR_database
	– DLL	New Stereotype	
	– EXE	New Stereotype	

RR Element		Mapped MD	Remark
	– Generic Package	New Stereotype	
	– Generic Subprogram	New Stereotype	
	– Main Program	New Stereotype	
	– Package Body	New Stereotype	
	– Package Specification	New Stereotype	
	– Subprogram Body	New Stereotype	
	– Subprogram Specification	New Stereotype	
	– Task Body	New Stereotype	
	– Subprogram Specification	New Stereotype	
	Language	New Tagged Value	If COBRA, JAVA, or XML_DTD are chosen, skip special component specification (not the one in Standard Specification)
	Documentation	Documentation	
	Declarations	New Tagged Value	
	Realizes	Residents	
	– Class Name	– Name	
	– Logical Package	– Owner	
	– Language	– N/A	
	Files	Hyperlink	
	– Filename	– File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	– Path	– Web Page	
	Properties		
	Font Size	Font (Size)	

RR Element		Mapped MD	Remark
	Font Style	Font (Style)	
	Font Name	Font (Name)	
	Font Color	Text Color	
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
	Stereotype Display		
	– None	– Show Stereotype = False	Icon can't be hided.
	– Label	– Show Stereotype = True	Icon can't be hided.
	– Decoration	– Show Stereotype = False – Suppress Content = False	
	– Icon	– Show Stereotype = False – Suppress Content = True	
Package	**Specification**		
	Name	Name	
	Stereotype	Stereotype	
	Package	Ignore	
	Documentation	Documentation	
	(Component) Diagrams	Inner Elements	
	– Component Diagram	– Implementation Diagram	
	Files	Hyperlink	
	– Filename	– File	Two Tagged

RR Element		Mapped MD	Remark
	– Path	– Web Page	Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	Ada83	Ignore	
	Ada95	Ignore	
	Properties		
	Font Size	Font (Size)	
	Font	Font (Name)	
	Font Style	Font (Style)	
	Font Color	Text Color	
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
	Stereotype Display		
	– None	– Show Stereotype = False	Icon can't be hided.
	– Label	– Show Stereotype = True	Icon can't be hided.
	– Decoration	– Show Stereotype = False – Suppress Content = False	
	– Icon	– Show Stereotype = False – Suppress Content = True	
Dependency	**Specification**		
	Name	Name	
	Documentation	Documentation	

RR Element		Mapped MD	Remark
	Properties		
	Font Size	Font (Size)	
	Font	Font (Name)	
	Font Style	Font (Style)	
	Font Color	Text Color	
	Line Color	Pen Color	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Component Diagram	**Specification**		
	File	Hyperlinks: File	MD: Implementation Diagram Two Tagged Definition are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	
	Documentation	Documentation	

Deployment Diagram

RR Element		Mapped MD	Remark
Processor	**Specification**		
	Name	Name	MD: Node with stereotype = Processor
	Stereotype	Stereotype	
	Documentation	Documentation	
	Characteristics	New Tagged Value	
	Processes		
	– Name	– New Tagged Value	
	– Priority	– New Tagged Value	

RR Element		Mapped MD	Remark
	– Documentation	– New Tagged Value	
	Scheduling		
	– Preemptive	– New Tagged Value	
	– Non preemptive	– New Tagged Value	
	– Cyclic	– New Tagged Value	
	– Executive	– New Tagged Value	
	– Manual	– New Tagged Value	
	Properties		
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Font Color	Text Color	
	Font Name	Font (Name)	
	Line Color	Pen Color	
	Show Scheduling	Show Stereotypes	
	Show Processes	Show Stereotypes	
	Stereotype Display		
	– None	– Show Stereotype = False	Icon can't be hided.
	– Label	– Show Stereotype = True	Icon can't be hided.
	– Decoration	– Show Stereotype = False – Suppress Content = False	

RR Element		Mapped MD	Remark
	– Icon	– Show Stereotype = False – Suppress Content = True	
Connection	**Specification**		
	Name	Name	MD: Association
	Stereotype	Stereotype	
	Documentation	Documentation	
	Characteristics	New Tagged Value	
	Properties		
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Font Name	Font (Name)	
	Font Color	Text Color	
	Line Color	Pen Color	
	Stereotype Label	Show Stereotypes	
	Line Style	Path Style	
	– Rectilinear	– Oblique	
	– Oblique	– Oblique	
Device	**Specification**		
	Name	Name	MD: Node with stereotype = Device
	Stereotype	Stereotype	
	Documentation	Documentation	
	Characteristics	New Tagged Value	
	Properties		
	Font Size	Font (Size)	
	Font Style	Font (Style)	
	Font Name	Font (Name)	
	Font Color	Text Color	

RR Element		Mapped MD	Remark
	Line Color	Pen Color	
	Stereotype Display		
	– None	– Show Stereotype = False	Icon can't be hided.
	– Label	– Show Stereotype = True	Icon can't be hided.
	– Decoration	– Show Stereotype = False – Suppress Content = False	
	– Icon	– Show Stereotype = False – Suppress Content = True	
Deployment Diagram	**Specification**		
	File	Hyperlinks: File	MD: Implementation Diagram Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	
	Documentation	Documentation	

Three-Tier Diagram (Three-Tier Service Model)

RR Element		Mapped MD	Remark
Three-Tier Diagram	**Specification**		
	File	Hyperlinks: File	Two Tagged Definitions are set value: hyperlinkText value is filename or path and hyperlinkTextActive value is **file://**.
	URL	Hyperlinks: Web Page	

Common Element

RR Element		Mapped MD	Remark
Note	**Properties**		
	Font	Font (Name)	
	Font Style	Font (Style)	
	Font Size	Font (Size)	
	Font Color	Text Color	
	Font Effect		Font Effect is ignored because HTML text size and normal text displayed in MagicDraw is not similar to each other.
	– Strike Out	– Ignore	
	– Underline	– Ignore	
	Font Script	Ignore	Language Encoding
	Line Color	Pen Color	
	Fill Color	Fill Color	
	Use Fill Color	Use Fill Color	
Text Box	**Properties**		
	Font	Font (Name)	
	Font Style	Font (Style)	
	Font Size	Font (Size)	
	Font Color	Text Color	
	Font Effect		Font Effect is ignored because HTML text size and normal text displayed in MagicDraw is not similar to each other.
	– Strike Out	– Ignore	
	– Underline	– Ignore	
	Font Script	Ignore	Language Encoding
Anchor Note to Item	**Properties**		
	Line Style	Path Style	MD: Anchor to Note
	– Rectilinear	– Oblique and ignore geometry	
	– Oblique		
	Line Color	– Ignore	

RR Element		Mapped MD	Remark
Association Class	**Properties**		
	Line Style	Path Style	MD: Link Attribute
	– Rectilinear	– Oblique and ignore geometry	
	– Oblique		
	Line Color	– Ignore	
Tool Name	Tool	Stereotype	
Model Property	Property	Tagged Value	